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HAVERFORD COLLEGE

The
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The Haverfordian

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BY A COMMITTEE

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Explanatory

MOST undergraduate activities have their periods of bloom and depression. For some years THE HAV-
ERFORDIAN has had a somewhat precarious existence and the recent editors feel that there is not sufficient literary activity among the undergraduates to warrant the continuation of this ancient monthly at the present time. It is likely that it will be revived by the undergraduates when and if circumstances become more favorable.

It is, however, undesirable that a publication which has reflected in a measure the life of the College for over half a century should completely lapse. It is desirable that the

name at least should be perpetuated, so that publication of the undergraduate monthly might be easily resumed at a later date without any break in the series. In connection with this situation, it has been felt for years that the College should have a means of communicating with the Alumni and interested friends of the College in such a way as to present more extended and authoritative articles than can be published at present. There are subjects directly connected with the life and work of the College which might well interest the Alumni, and it is certain that some articles of general interest by Alumni would be forthcoming if a suitable channel were provided.

Therefore the Board of Managers of the College has sanctioned the publication of a semiannual issue to be called THE HAVERFORDIAN to consist of approximately twenty-five pages each issue and to be edited by Mr. W. M. Wills, '04, with the assistance of a member of the Faculty and one or two members of the undergraduate body to be selected by these two men. This periodical, while continuing the name of THE HAVERFORDIAN, will evidently have a somewhat different function from the old monthly and will furnish, it is hoped, a convenient means of communication between the College and its Alumni. It will be sent free of charge to all those to whom the *Haverford News* is customarily sent and will serve to complement the information contained in the weekly.

W. W. COMFORT.

The Quaker Collection at Haverford

THOMAS E. DRAKE

*Assistant Professor of American History and
Curator of the Quaker Collection*

THIS biographer tells us that Thomas Thompson, a Quaker druggist and antiquarian of Liverpool who lived a hundred years ago, "took much interest in Friends' literature, and early commenced collecting all books relating to the Society of Friends, with a view of forming a perfect collection." Needless to say, Thomas Thompson's high hopes of gathering the perfect Quaker library were never realized, for the number of Quaker books in existence even in his day far exceeded the collecting abilities of any individual. But his purpose was admirable, and the Friends' Reference Library in London is now richer for the zeal which he displayed. This Quaker library, though not "perfect," as Thompson would have had it, is superior to anything else of its kind in the world. Institutions are longer lived than individuals, and their prospects for perfectibility are somewhat greater. For this reason Haverford College has assembled through the years a Quaker library which is larger than any other in this country. The task is an appropriate one for

Haverford as an institution of learning with a Quaker heritage.

To the ordinary undergraduate, and perhaps to the alumnus who thinks back upon his undergraduate days, the Quaker Collection may seem to be remote from the avowed purpose of the College to give a superior education to a limited number of students. The Quaker Alcove is remembered chiefly as a retreat from the scrutiny of the watch-dogs of the Library, where tired feet may be elevated above one's book as an aid to study or a preliminary to sleep. The shelves are closely packed with books that are somewhat forbidding in their ancient bindings. As for reading them—no, that might destroy the spell of the place! Likewise the Autograph Room in Roberts Hall, where Quaker manuscripts are kept, remains to some a dim memory of heavy doors and black steel shutters. It is no place to linger when one is on his way to see the Dean or the President, and certainly no place to stop when the interview is over.

On the other hand, many Haverfordians have a different im-

pression of the Quaker Collection. They have found their study in American and English history, in philosophy, in religion, and in Quakerism itself, enriched by reference to volumes in the Quaker Alcove. Others have been interested by the exhibits of autograph letters and manuscripts in Roberts Hall.

This enrichment of undergraduate education is the primary function of the Quaker Collection. But the indirect influence of the Collection is also highly important. It is closely related to Haverford's effort to provide education of university quality within the framework of a small college. Success in this effort is largely dependent, of course, on the character of the College faculty. Men with the scholarly training and interests of university teachers are requisite to Haverford's program of furnishing college instruction of a superior kind. Nevertheless, the stature of a college such as Haverford is increased if the college excels in something which is not directly related to its teaching program. Amherst College, for example, has the great Folger Shakespeare Library under its care, and undoubtedly benefits thereby. Oberlin is notable for its fine Department of Music. Williams gained in reputation from the meetings of the Institute of Politics which were held on its campus. Haverford, likewise, profits from the fact that it is a

recognized depository of the records of Quaker thought, and a center for the study and exposition of the Quaker way of life.

The dynamic and pervasive qualities of Quakerism have made it a force in American life of far greater significance than the membership statistics of the Society of Friends would indicate. In colonial times the Quaker ideals of religious and personal liberty had a profound influence in shaping the development of American customs and institutions. The nineteenth-century crusade against slavery drew inspiration from the Quaker pioneers in the field. In recent times the application of the Quaker principles of peace and love has served to mitigate, if not prevent, the horrors of war abroad and of depression and exploitation at home. Quaker meetings are now arising in urban and educational centers, where people are seeking a faith and a program of action which will lead to peaceful change through goodwill and Christian love, rather than to violent change induced by hate. .

The literature which this dynamic Quakerism has produced is voluminous, as Thomas Thompson discovered. With the tracts and essays of the "First Publishers of Truth" in the seventeenth century, with memoirs and religious journals in later generations, and with recent books and reports on topics of religious and social interest, Friends have kept the

presses busy. They have been articulate to an unusual degree, perhaps because their renunciation of the sword has left them doubly dependent on the pen. When Joseph Smith published his great *Catalogue of Friends' Books* in 1867, the stream of Quaker titles had passed the fifteen-thousand mark, with many of the titles reprinted from one to twenty times. The stream has not noticeably decreased in volume since Smith's day.

This large quantity of printed material, regarding a group of such importance in American life as the Friends have been, accounts for the current interest in research in Quaker history. A recent survey by the Friends' Historical Association of the extent of this interest revealed that over fifty people in colleges and universities are currently engaged in research relating to Quakerism. Some of these investigators are Friends, some not. But all are interested in some aspect of the history and philosophy of Quakerism.

The way of the student in Quaker history is not as smooth in this country as in England, for there is no institution here which compares with the Friends' Reference Library in London, with its great collection of books and manuscripts. The division of American Quakerism into some thirty yearly meetings and the unfortunate separations within

many of the meetings has served to decentralize the Society of Friends and scatter its records in many places. There are several publishing houses and several book stores, each of them independent of the others. Manuscript records are scattered in nearly thirty yearly meeting depositories and in the vaults and safe deposit boxes of hundreds of local meetings.

Philadelphia is as much the center of American Quakerism as any city can claim to be. It once had a large Quaker library, which originated in the gift to the Philadelphia Monthly Meeting of the personal library of Thomas Chalkley, eighteenth-century Quaker sea captain and minister. In later days the collection was known as the Friends Library, at 142 North Sixteenth Street. But as time passed it became impossible to care for the library in that location, and it was finally broken up in 1929, and its books distributed among the libraries of the various Quaker colleges. Haverford had first choice when this distribution was made, and therefore fell heir to the rarer volumes and to the responsibility entailed in their care. This responsibility involves several duties. The books should be carefully preserved and guarded from loss. They should also be made available for use by cataloguing and special indexing in certain instances. Finally, there is the duty of keeping the

collection up to date, by obtaining current publications of Quaker interest and filling in the gaps among titles that are old and out of print. The one task involves establishing contacts with sources of Quaker publications, both periodical and book, in all the yearly meetings in this country, and as widely among Friends abroad as is possible. The other requires a continuous examination of book-sellers shelves and second-hand book catalogues, threshing a great deal of straw for the valuable grain which is hidden away. The expense of acquiring the rarer out-of-print items is considerable. Only recently a two-page leaflet of 1683 concerning William Penn's falsely alleged death in America was offered to the College at \$125.00, an offer which had to be declined. But this expense can be reduced by cooperation in a union catalogue arrangement with Friends' Historical Library at Swarthmore College and with other libraries in this area. Duplication of rare items can thus be avoided if they are already available in the Philadelphia neighborhood, and cheap reproductions of these rarities can be obtained, if required, by the processes of photostating or microfilming. By these various means it will be possible to have available either at Haverford or in the near vicinity a large portion of the printed materials which the

research worker in Quaker history might wish to use.

Quaker manuscripts present an entirely different problem in collection and preservation. The manuscript records of Quaker meetings include minutes and books of membership. In most meetings these data have been so carefully recorded and preserved that, taken as a whole, they represent one of the largest bodies of church records in this country. But they are scattered almost as widely as American Quakerism itself, and a library such as Haverford's can only hope to keep a record of their location and to encourage their proper care.

Another type of Quaker record which Haverford can and does preserve is the manuscript writings of individual Friends. Diaries, letters, and family papers are of great importance because of the light which they throw on the interests and activities of Friends as individuals. Such records are not preserved in the depositories of Friends' meetings, for meetings are only interested in their own official records. But it is desirable that some institution should take it upon itself to gather and save these records if they are to be rescued from fire and the paper mill. Haverford is the appropriate place to do this, and in recent years a number of people have decided to deposit with the Quaker Collection family records which

illuminate the lives of earlier generations of Friends.

Haverford has thus enlarged on Thomas Thompson's ideal of gathering a perfect collection of Quaker books by adding Quaker manuscripts to its library of printed volumes, and by endeavoring to make these books and manuscripts available for the use

of students and research scholars. In so doing the College has furthered the purpose of its founders and of its supporters through the years—"to encourage the growth, among a limited number of young men, of vigorous bodies, scholarly minds, strong characters, and a real religious experience."



Chorus Dejected

A lingering chorus of women inviolate
Trode on the field of the happily dead,
Trode with a motion forever monotonous;
This was Elysium, these were the virtuous.
Here in the coolness the virgins enjoy
A mass with a soul burning deep with regret
Chanted a song of despair for time gone:
Slowly they walked, and slow was the moaning:

This is the ending, for here we are helpless,

Gone is the time of a maiden's volition,

Departed are we from reality's course,

Despairing, detesting the land of the happy.

Wild were the women who echoed these words,

Born of futility was the low chant,

And low were their souls, and groping in dust.

With a core aching slow from a time immemorial,

Long since forgotten—the time of their birth.

Damned to Elysium, these women, forever,

Never again in the form of the body,

Gone for all time from the land of the senses

A lingering chorus of women inviolate

Trode on the field of the happily dead.

SAM WITHERS, '39.

The Federal Government and Radio

GERALD C. GROSS, '26

Chief, International Section, Federal Communications Commission
Secretary, Interdepartment Radio Advisory Committee

IN VIEW of the very broad scope of the subject assigned to me, it will perhaps be better for me to give some impressions from a personal viewpoint; i. e., from the point of view of a Haverfordian writing for other Haverfordians. When I first came to Washington in July of 1926, fresh from the trials and tribulations of our College Broadcasting Station, WABQ, which had been operated for the greater glory of radio and the lesser glory of scholastic standings, by such kinsprits as Bill Halstead, '27, Irving B. Smith, Jr., '27, and Charlie Thompson, '27—to cite but a few, it was with mingled feelings that I joined the staff of the National Bureau of Standards Radio Section. Many times had I heard in Collection and elsewhere that while Haverfordians could be found in most of the fields of human endeavor, such as law, banking, medicine, and business, their steps did not often lead them into Government service. I am glad to note that this tendency has now changed, and that more and more of our graduates are finding their way into

the various fields of public service which our National Government offers. My experience in this field may be of value to future Haverfordians, and, if so, this article will have served its purpose.

After graduation, I spent two years of purely technical work in the Government's most important radio laboratory at the National Bureau of Standards. During that time I was engaged in a number of technical development problems, including fundamental research and design of the interlocking radio beam system now used on all the major airways, and the development of standard frequency transmissions. It will be of interest to other engineering students to find that, as I compared the training which I had received at Haverford and the course which I had taken with the training which other members of the staff had received at the larger engineering schools, such as Massachusetts Institute of Technology, Harvard, Yale and Columbia, I found that our Haverford Engineering Department had provided me with almost identical and in some cases with superior

technical training. I think this point is worth emphasis, because while the reputation of Haverford as a fine arts college is known throughout the world, it is not commonly considered to be an Engineering School.

After two years at the Bureau of Standards, I transferred to the Government regulatory body on radio, first known as the Federal Radio Commission, and later, after the Communications Act of 1934, as the Federal Communications Commission; I have been associated with that organization since 1928.

The Government's interest in communications is enormous. Not only is it concerned from a regulatory standpoint with the administration of all radio, telegraph, and telephone services of an interstate or international character, but in its other branches (such as the Army, Navy, Department of Interior, and Department of Agriculture) it is actively engaged in the operation of such services. From a regulatory standpoint every non-Government station operating within the United States, its territories or possessions, is subject to the jurisdiction of the Federal Communications Commission and must obtain a license from this Commission before it can operate. In addition to the broadcasting service, which with its seven-hundred odd stations is more in the public eye than any

other service, there are several thousand ship, aircraft, police, motion picture, geophysical, emergency, and similar types of stations, to say nothing of the forty-eight thousand licensed amateur stations, which carry on a daily communication service and are so active each year in times of national disaster—such as floods, hurricanes, and earthquakes.

The Federal Communications Commission also has jurisdiction over all interstate and international radio matters, and all tariffs filed for such services are subject to the approval of the Commission. As an example of the far-reaching effect of such supervision, it was instrumental in cooperation with the affiliated companies of the Bell System in bringing about annual rate reductions totaling some twenty-two million dollars to the benefit of the telephone users generally and with the consequent increase in telephone traffic.

Under the Communications Act of 1934, while the Federal Communications Commission is the Government body charged with the supervision of all non-Government radio stations, Government stations themselves are allocated frequencies by the President. In the performance of this duty under the Act, the President is guided by the recommendations of the Interdepartment Radio Advisory Committee, which is a Committee formed of repre-

sentatives from each of the twelve Government Departments interested in radio. This Committee has thus very important technical work to perform and its functions for the Government radio services are similar in nature to the functions for non-Government radio services which are carried on by the Federal Communications Commission.

In addition to the complicated domestic communication problems, the United States Government through the Department of State, the Federal Communications Commission, and the other Government agencies mentioned above must cooperate with other nations of the world in order to bring about agreement on the various communication problems which have international, as well as domestic, repercussions. It is necessary for the various nations of the world to meet from time to time at international communication conferences. Some of the more important of these problems relate to the international frequency allocation tables which serve as a framework within which the various governments can make national allocations to their own services; international radio and telegraph rates; international classification of messages; international agreement on standards of frequency tolerance; international procedure in the mobile services involving the police and other emergency calls;

international standards for radio equipment to be installed on ship-board, and the types of ships compulsorily equipped.

It has been my privilege, during the time I have been with the Commission, to attend, as a representative of the United States, conferences of this sort in the following places: Washington, Prague, The Hague, Copenhagen, Madrid, Mexico City, Lisbon, Warsaw, Habana, Bucharest, Lima, and Cairo. The Cairo Conference, which was held from February until April, 1938, was an interesting example of this sort of conference. Some seventy nations of the world assembled together in Cairo for a period of more than two months in order to revise the existing international radio, telegraph, and telephone regulations. The United States was represented by a delegation of fourteen under the Chairmanship of Senator Wallace H. White, Jr., of Maine, long a radio leader in the Congress of the United States. Our Government, which obviously has a great stake in communications, took a leading part in the conference and succeeded in bringing back to the United States for submission to our Senate at its next session a new World Treaty on Radio which will continue to serve as a general framework for our domestic regulation.

And now, just a word about Government operated stations.

Every minute of the day scores of messages are flashing through the ether, originating from and destined to stations operated by the United States Government. Included with these are the hundreds of stations operated by the military services of the Army and Navy, both on land and sea, by the Coast Guard in its rescue work of life and property, by the Civil Aeronautics Authority in its many safety and meteorological services to aviation, by the Department of Agriculture and Interior in their Forest and National Park Services, respectively. All of these stations are operated with but one major objective in view and that is to increase the efficiency of the military and civil branches of our Government for the greater public good.

It is manifestly impossible in an article of this length to attempt to describe all the present activities of the Government in the field of communications, and a glimpse into the future reveals ever-increasing developments. In this connection, the following passage written by the author in collaboration with a committee of the Federal Communications Commission studying technological trends for the National Resources Committee may be of interest:

"Perhaps no industry in the world has had such a rapid growth and such remarkable development as has taken place in communications. We must content ourselves with a study of past

progress in this field, and by drawing certain imaginary graphs of past progress, attempt to project them into the future in such a way that certain trends of themselves become apparent.

"One important trend is the great increase in the use of communications for purposes which 10 years ago had not been even considered. For example, the tremendous growth in two-way police systems; the dependence of the aviation industry on radio as a vital part of that branch of transportation; the growth in the use of radio for such miscellaneous services as geophysical exploration parties, coastal harbor radiotelephone service to fleets of fishing vessels and tugboats, harbor communication to fireboats and the great number of incidental services using general experimental frequencies for scientific development.

"Probably the most significant trend, however, is the relative imminence of television. Since 1929, television as a scientific tool has been in a rapid process of development in many large and small laboratories in this country. From time to time predictions have been made that 'it is just around the corner,' and the particular corner usually referred to was an engineering one. A number of laboratories in this country have now developed the technical phases of this art to the point where it can safely be said that, although many, many technical problems remain to be solved, it is, nevertheless, possible to transmit over a local area of 10 to 20 miles radius fairly good pictures having the clarity and details of the average home moving picture.

"It is believed that the greatest service which communications can do in the future will be to provide extensions into the hitherto remote and inaccessible places whereby people who formerly had no means of communication can be connected with the communication arteries of the world. Tremendous progress has been made during the last decade in this direction and, undoubtedly, tremendous progress will take place in the future. The other great forward step in world civilization which can be made is in the effective use of communications, both telegraph and telephone by wire, but more especially by radio, in the development of under-

standing, mutual respect and tolerance among the nations of the world. Much has been done along these lines in the past and a great deal more is expected in the future.

"Much of this service will be accomplished by printer, by facsimile transmission, and by long distance vision. There are thousands of inventions which have been made in the past and it is confidently expected that a similar number will be developed in the future in the solution of the age-old problem of mankind—Communication."

In conclusion, it seems to me that no better general directive describing the function of Government with respect to communications can be given than the following excerpt from the Communications Act of 1934, Section 1, Title I:

"For the purpose of regulating interstate and foreign commerce in communication by wire and radio so as to make available, so far as possible, to all the people of the United States a rapid, efficient, Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges, for the purpose of national defense, for the purpose of promoting safety of life and property through the use of wire and radio communication, and for the purpose of securing a more effective execution of this policy by centralizing authority heretofore granted by law to several agencies and by granting additional authority with respect to interstate and foreign commerce in wire and radio communication, there is hereby created a Commission to be known as the "Federal Communications Commission," which shall be constituted as hereinafter provided and which shall execute and enforce the provisions of this Act."



Meditation Before the Blessed Sacrament

Blue dusk slips through the rain-gemmed panes
and lingers closely 'round the ruby light
that flickers bravely through the mist
above the golden monstrance that enframes
the gleaming Body of Eternal Life
within this chapel of perpetual bliss.

A solemn peace engulfs the restless tide,
here, in this port where life begins and ends
in silence, awe, and unimagined peace . . .
So faith provides a taper set to guide
our hidden way as on it slowly wends
into Oblivion and deep surcease.

"Alpha and Omega, to whom shall bow
All nations at the doom, is with us now."

EUGENE BOTELHO, '41.

Haverford in The Eighteen Nineties

HENRY S. PRATT

David Scull Professor of Biology, Emeritus

TO ONE who has lived in Haverford as long as I have it is interesting to look back to the early years of his life here, to recall to his mind the college of forty-five years ago and compare it with what he sees about him today. At that far-off time the only buildings on the campus, besides the professors' houses, were Barclay Hall, the Observatory, Founders, the Library, the Cricket Shed, Chase Hall, and Whitall Hall (although these buildings did not have then their present form), and all the business of the college had to go on in these limited quarters. The Chemistry Building, the Infirmary, the Gymnasium, the Engineering Building, Sharpless Hall, the Cricket Pavilion, Roberts Hall, the Union, Lloyd Hall, and Merion Hall did not then any of them exist. The Collection room and the Registrar's office were located in Center Barclay and the President's office in Founders, and these two officers, without deans or secretaries, carried on their duties alone, except for occasional help from student assistants.

The dining room and kitchen at that time were located in the basement of Founders, the dining room wing of that building not having yet been built. The chem-

ical, physical, and biological laboratories and the gymnasium and infirmary were also located in Founders. The campus then had a truly rustic appearance. The lawn between Barclay and the skating pond was a hay field which was mowed twice a year. The pond was drained at the close of the skating season and the rest of the year was a wet bog which kept the neighborhood well supplied with mosquitoes.

Simple as was the plant of the College and its equipment in 1893 when I joined the faculty, they were sufficient for the purposes of the student body of the period, for Haverford at that time had, all told, fewer than a hundred students. I was not the only new member of the faculty in the autumn of 1893, for Dr. Rufus M. Jones, Dr. J. A. Babbitt, and Dr. W. P. Mustard also joined the teaching staff in that year. Dr. Jones came to teach philosophy and psychology. Dr. Babbitt was then a young man who had just graduated from Yale where he had been prominent in athletics and field sports; he came to Haverford to be athletic director, football coach, and to keep order in Barclay Hall. And inasmuch as these duties did not seem to keep him busy he was made, in

addition, registrar of the college, given the job of correcting themes in the English department, and made assistant in the department of Biology. Soon after he came to Haverford he entered the Medical School of the University of Pennsylvania and began the study of medicine. Dr. Mustard came to Haverford to teach Latin; after fourteen years of service he accepted a call to Johns Hopkins, and Dr. Richard M. Gummere, of the Haverford Class of 1902, succeeded him in the Latin department.

At that time Collection was held in the evening after dinner, the object of this arrangement being to prevent students from going into Philadelphia at night. The entire faculty attended and of course the whole student body. When a new professor came to Haverford, he was expected to speak at his first Collection and tell his colleagues and his prospective students something about himself, and it was also intimated to him that he might speak of his religious experiences. Thus the first Collection service of the year was always one of unusual interest, and the first one of this year of 1893, when as many as four new professors were to speak, was especially so.

But it was a sad ordeal to most of them. Dr. Jones, who was an experienced public speaker, approached this ordeal with perfect equanimity, but to the other three

it was a matter of great anxiety, because they did not know at all either what they were expected to say or what they would be able to say. I myself spent a considerable portion of the afternoon of the first day pacing up and down on the campus trying to arrange a few appropriate thoughts; during my walk I came across Dr. Mustard with a writing pad in his hand engaged in the same painful occupation, and nearby I saw Dr. Babbitt sitting on a log so troubled in spirit that he did not notice me, although I passed quite close to him.

During my first year in Haverford Dr. Babbitt and I lived in the two large middle rooms of Center Barclay, he was on the second floor and I was on the third, just above him. We had a tempestuous winter, that first year. Not being myself responsible for order in the building I paid no attention to the rumpus that often went on in the halls, not even when I heard a donkey's melodious voice on the floor below, or when a heavy cannon ball rolled the length of the hall with a noise like a prolonged clap of thunder. But Dr. Babbitt had order to keep and was obliged to prevent these nightly pranks from becoming too boisterous, and if possible to prevent them altogether. Those were the days of soap slides and cannon ball rolling in the halls; also when a couple of chairs or

other pieces of furniture, or a barrel might be dropped from the third floor to the first to hear the crash; or when a bonfire might be built in the hall; or when Mr. Hirst's donkeys might be induced to ascend the stairs and meander through the upper halls.

One donkey episode became famous. The patient but reluctant animal had been persuaded by much tail twisting and being pushed from behind and pulled in front to go up the lower stairs to the second floor. By the time the cavalcade reached Dr. Babbitt's door such a tremendous clatter had been raised that the door instantly opened and the indignant custodian of quiet rushed out. The students at once fled one way and the donkey the other to the end of the hall, but not finding a way of escape in that direction he turned and came back to Dr. Babbitt just as the latter was haranguing the students on the error of their ways. The donkey listened patiently until he finished and then raised his own voice in a series of loud heehaws by way of applause. President Sharpless told the students in Collection next day they should choose their playmates more carefully.

This disposition of high-spirited young people to play games and tricks when they come together is of course perfectly natural, and no less so today than it was in the eighteen-

nineties; but during that period there was probably a greater tendency occasionally to misbehave in the classrooms than there is today. A young, inexperienced instructor then often had the problem of disorderly classes to solve before his teaching could be successful, and it sometimes happened that he failed to solve it and in some cases had to leave the college before the end of the college year. This happened especially when the instructor, fresh from a university graduate school, came here to supply the place of a professor who was absent on sabbatical leave.

I remember coming into the faculty room one morning and finding one of these young instructors taking alarm clocks out of his bag. The bag was full of them, and they had been going off at intervals in the classroom, during the hour. At another time a mouse was let loose in the classroom, causing great apparent alarm among the students. The instructor appointed a committee to catch the mouse, and it naturally took the rest of the hour to do it. Many similar incidents could be mentioned. The proper procedure in such cases was illustrated by a mild-looking young instructor who, at the first sign of serious disorder, at once expelled the offending student from the room and from the class. He was told not to come to that class any more, and he did not come.

His appeal to President Sharpless was fruitless. There was no more disorder in that class.

The kind of clothes the students appeared in about the College, in the classrooms and laboratories at that time early attracted my attention. They all seemed to be wearing not merely their old clothes, but their very oldest, or perhaps their brother's or father's oldest. A pull-over sweater (not always immaculate) and a pair of decrepit trowsers were a usual costume. The present-day Haverford student, who is usually neat in his dress, is a veritable "glass of fashion" beside the student of forty-five years ago. In fact, I know of no single characteristic in which the modern differs more from the ancient student than in the matter of dress. I attribute this difference partly to the larger number of students in attendance here at present, and partly, and perhaps mainly, to the trend of the times; men are generally much neater and more careful in their dress now than they used to be.

Another effect of the much smaller size of the College at that early period was the much more direct interest the members of the Board of Managers took in the teaching of the classes than they are able to do at present. It was not uncommon then for members of the Board to visit a class and sit in while the teacher was conducting it, sometimes to his great

embarrassment. I shall never forget my confusion when Philip Garrett, who was a very formidable person, appeared in one of my early classes in company with President Sharpless and another manager and stayed through the hour, asking questions on the subject of the lecture. Also, the annual joint meeting of the Board with the faculty in October was then not the informal get-together and dinner it now is but a more or less formal convocation in the Faculty room, and without any dinner. John B. Garrett would sit at the head of the long table and solemnly call on the faculty members by name, in the order of their rank: "Dr. Lyman Beecher Hall, professor of Chemistry; Dr. Frank Morley, professor of pure Mathematics; Dr. Ernest William Brown, Fellow of the Royal Society, professor of applied Mathematics;" and the professor or instructor whose name was called would get up on his feet and say something about his work. He always said that his Department was in a flourishing condition, that his students showed great interest in their work and got good marks; he was too scared to say much else.

During the eighteen nineties, as today, the main interest of the student body in the fall of the year was football—and especially the intercollegiate games. Haverford played other small colleges

in this region, and ended the season with the Swarthmore game. The game with these famous rivals was by far the most important of the season, the success or failure of which was judged by its result. If we lost the Swarthmore game, the football season was apt to be considered a dismal failure, no matter how many others were won. In 1893 Haverford football was at a low ebb because for several years we had lost every Swarthmore game and often by a large margin. The Swarthmore team of that period, with George Brooke, a football player of national fame, playing halfback, and a grandstand of wildly cheering and flag-waving co-eds to applaud their deeds of heroism for Alma Mater, seemed unbeatable, and Haverford football morale sank very low. The year before, a professional coach had been hired in an effort to improve the situation, but the effect was slight, and Haverford continued to be beaten. Then, defeatist arguments began to creep into football speeches. We were told "the game's the thing, and not the winning of it," and a defeat would sometimes be called a moral victory.

With the advent of Dr. Babbitt as Athletic Director, however, a different spirit began to animate Haverford sports, into every department of which his vigorous leadership and remarkable *èlan* put new life. This was

especially shown in the football season of 1895, when no professional coach was engaged and the team was coached entirely by Dr. Babbitt and several alumni under the leadership of Dr. Branson. Haverford won the Swarthmore game that year by a score of 24 to 0, and the team which achieved this notable victory, and thus put an end to a long series of Swarthmore game defeats and consequent gloom on the Haverford campus, is probably the most famous in the annals of Haverford sports. It consisted of the following men: L. H. Wood, '96, Captain; W. K. Alsop, '96; J. E. Butler, '98; E. B. Conklin, '99; Arthur Haines, '99; Kenneth Hay, '99; J. A. Lester, '96; F. A. Swan, '99; A. G. Scattergood, '98; J. H. Scattergood, '96; C. A. Varney, '98. The brilliant playing of all of these men under the vigorous leadership of Captain Wood, and more particularly the long runs of A. G. Scattergood and the extraordinary high punts of Alsop, have become a tradition among the older Haverford alumni.

An interesting episode of the game was that the Scattergood brothers, who were such important factors in this victory, and who had been prevented by parental objections from taking part in intercollegiate games throughout the season, received at the last moment permission to play in the Swarthmore game.

Haverford cricket, the other major Haverford sport at that time, also flourished during this period. John A. Lester, Haverford's greatest cricketer, was in the Class of 1896. During his first year his batting average was over 100, and in his second year it was over 60. In the summer of 1896 he was Captain of a Haverford team which went to England to play the English Public Schools and Universities. The team played fifteen games, of which it won four, lost four, and drew seven. Lester's batting average on this trip was 79.

During our first year in Haverford Dr. Babbitt and I were ambitious to learn to play cricket, a sport which has been so characteristic of the place, and we joined the group of students who practiced regularly in the Cricket Shed throughout the winter under the guidance of the cricket coach. Cricket, however, is a game which usually must be learned while one is young, and we never got very far in our training, although we played in the shed during the winter. My greatest achievement as a cricketer was the scoring of double figures in one of the annual games between the faculty and the students.

I am sometimes asked if, in my opinion, the Haverford student type has changed in the forty-five years that I have known the College. This is a question that is not easy to answer, because, in

the first place, the times have changed enormously in these few College generations, and the College has not stood still but has changed with them, and in the second, I myself have changed. I came here a young man and now I sometimes find it difficult to judge old conditions in the light of recent developments. Much has undoubtedly altered in Haverford with the passage of time, but there are many reasons why the Haverford student type has remained fairly constant. A comparison of a Haverford catalogue of the nineties with a recent catalogue would show very many family names common to both. The same families which sent their sons here then are still sending them in the succeeding generations. The traditional academic, social, and religious influences which now surround the life of the Haverford student are quite similar to those of forty-five years ago, and have tended to prevent much change in the kind of boy and young man who comes to Haverford for a college education. That there is a distinct Haverford type which is recognized elsewhere over the country I am very sure. I have sometimes been astonished while travelling, often far from Haverford, in the west or south, to find that the College is so well known in academic circles, and is known especially for the particular type of student it produces.

Guerre Mondiale

COURTS OULAHAN, '42

Several men who served during the last war have told me that any idea I may have at present of being unwilling to fight will disappear if another war comes. I could not, they told me, help but be stirred by daily parades, by articles in magazines and newspapers, by constant verbal appeals, and by the example of others enlisting. I never fully realized the almost certain truth of their prediction until I discovered how unavoidably and unintentionally I could come under the influence of propaganda even in my every-day life.

WE FIGHT to assure the absolute independence and complete integrity of Spain—"The Republic seeks the liberation of our territory from the foreign military forces which have invaded it"—"The Spanish state will guarantee full rights to citizens in public and private life"—"We renounce war as an instrument of national policy"—"Franco molds the clergy to his desires." The windows of the *Bureau National Espagnol de Tourisme* in Paris blazon the righteousness of the Spanish Loyalist cause.

Two years ago bright posters in these windows invited foreigners to visit the museums and art galleries of Madrid, the orchards and vineyards of Catalonia, and the mystic cities of the Moors. Today, in place of these posters, photographs and huge signs cry out to the crowds on the Boulevard de la Madeleine that the Republican army is defending democracy in one phase

of a world-wide war against fascism.

Every morning a group—increasing in number as the hours pass—gathers in front of the Bureau. Attracted by a half-glimpse of black and white pictures, Parisians step from the flow of sidewalk traffic and linger on the outskirts of the semi-circle. A caption—"Here is how the Fascists treat their prisoners"—easily catches the eye. A text set in large type gives the alleged facts of an unfortunate militia-man's death. Other items describe in glowing terms scattered Loyalist victories and the famous "Thirteen Points" of Prime Minister Juan Negrin.*

The eyes of the crowd do not linger long on pictures of mangled bodies on some Catalonian battlefield. Men soon forget dead fighters in the contemplation of

* As set forth in the declaration of April 30, 1938. "The Thirteen Points for Which Spain Is Fighting." Barcelona: *Ediciones Espanolas*.

marching columns of khaki-clad Republican soldiers. Where noise is ordinarily the unmistakable characteristic of a group of Frenchmen, only an occasional murmur escapes those assembled before the Bureau.

The unusual silence of the crowd first attracted me to the window. The men were so engrossed in their reading, however, that it was impossible to push through them to the posters and photographs. Signs scattered strategically above the display informed me that there was a larger exhibit in the basement of the building. My interest aroused by such catch-phrases as "Loyalist courage" and "fascist cruelty," I descended a staircase and entered two rooms in which a display of bright maps, cartographs, and posters created the illusion of a huge rainbow, so striking was the range of colors. I soon found the contents of the display equally appealing.

Adolf Hitler has written in *Mein Kampf* (a volume from which the authors of the display had chosen many significant passages) that to inculcate an idea in a man you must present that idea as a formula to be repeated over and over again. The Spanish Republicans clearly patterned their exhibit on the Fuehrer's method. Each section of the display repeated four primary ideas: (1) "The destiny of France is being decided in Spain;" (2) "Fas-

cism realizes its vast program of conquests" through (3) "the apathy of the democratic powers;" (4) "Energy, firmness, and resistance" are the only means of combatting this "menace." A *Preface* in red and black letters summarized these four points for the visitor before he passed to the cartographs and maps that supported these contentions.

When Japan seized Manchuria in 1932, newspaper correspondents flooded the American press with dispatches predicting further Nipponese aggression in view of the fact that Great Britain and the United States had taken no definite stand during the crisis. Since then, not only has Japan expanded her territory in eastern Asia, but the world has been jolted successively by Italy's annexation of Abyssinia, Germany's remilitarization of the Rhineland, the *Anschluss* between the Reich and Austria, and finally the Civil War in Spain. Texts affixed to maps describing these events in the exhibition stressed the main facts of these so-called "aggressions" as well as the "compromising" actions of Britain, France, and the League of Nations. A few choice items underlined in black on the posters particularly interested me: "One of the first acts of feebleness of the League of Nations—heavy with consequences for the future of Europe and the world—has been its passive attitude towards the

annexation of Manchuria by Japan;" "France declares embargo on war materials to Spain July 25, 1936;" and finally, "The beginning of conversations between London and Rome in regard to an Anglo-Italian pact President Roosevelt's defence of international law in the speech of January 3, 1938, was even included under the title, "The War in Spain."

Six cases of fascist "violation" of international law, three examples of "democratic weakness," one alleged verbal defence of democracy—these were typical incidents in a struggle which the authors of the display termed *La Guerre Mondiale*. I turned my attention next to two cartographs which answered a question that a visitor might reasonably be expected to ask—"Why are Hitler and Mussolini aiding Franco?"

In spite of the suspicion with which I regard facts presented in the form used in the basement of the "tourist" bureau, lists of figures never fail to impress me. Perhaps the very exactness of ideas conveyed numerically convinces me of their basis in fact. A map showing where the mineral, animal, and vegetable products of Spain are to be found seemed to clarify in my mind the reason behind the active intervention of Hitler and Mussolini. Lists of the amounts of coal, iron, copper, zinc, manganese, barley, wheat, hay, and wool which Germany

and Italy have imported in recent years were supplemented in this exhibit by the figures for Spain's exportation of these products over the same period.

If they were subtle in their intimation that the exports of Spain were large enough to supply the needs of the dictatorships, the authors of the display directly accused Germany and Italy in "The Aggression Against Spain." Both these countries were branded as "liars" who, while professing their acceptance of the principle of non-intervention in the internal affairs of another nation, followed an entirely different policy. A text, which I could not help admiring as passionate and forceful writing, proclaimed that "the Spanish army, 600,000 strong, can win against the invasion of 'volunteers' from Germany and Italy—provided France restores all liberties of commerce and reopens the frontier of Spain."

Granted that the outcome of the Spanish war is of particular importance to France, reason demands a statement of the exact threat made by a fascist Spain to the Continental democracy. An argument for preventing a Franco victory (or so I and every other visitor was supposed to believe) lay in the theme of the most spectacular of the exhibits—"The Menace over France."

The exhibit stood in the most conspicuous position at the far end of the two rooms directly

opposite the staircase. With a background made from photographs of bomb-racked Madrid, three air fleets approached a large map of France from three different directions. Names and insignias were lacking on the miniature models, but, after all, these were not necessary. 'Planes flying from the south, southeast, and northeast could only belong to Franco, Mussolini, and Hitler. A small sign at the left of this masterpiece of map-making carried the words, "Enemy 'planes can fly over four-fifths of French territory."

Being an American, with three thousand miles of ocean separating the United States from Europe, I was not numbed by the thought of having my home bombed over my head. Yet, being a human, like the French who had this prospect to look forward to, I did feel the pang which comes when we imagine ruined houses, homeless children, and all the other horrible features of aerial bombing—the pictures of which were there before me in the background of the exhibit. As if anticipating my reaction to these pictures and preparing to dispel any aloofness I might want to feel towards the affairs of the rest of the world, the authors of the display had prepared two huge maps stressing the influence of Germany, Italy, and Japan in both the Eastern and Western Hemispheres.

A cartograph of the Old World named nine nations as the future victims of fascism: Poland, Hungary, Rumania, Yugoslavia, Albania, Bulgaria, Czechoslovakia, Lithuania, and Greece. In Central and South America, Cuba, Guatemala, Nicaragua, Venezuela, Peru, Brazil, Ecuador, Bolivia, and the Argentine were labeled as fertile soil for totalitarian ideas.

The last exhibit finished, I walked slowly towards the staircase. My head turned with such phrases as "fascist menace," "international outlawry," "democratic submission," and "unite against these enemies of civilization." Then, as if to supplement and give reason to my emotions, the whole mass of facts seen that day flooded into my thoughts: six cases of fascist "violation" of peace since 1932—intervention in Spain—danger over France—Germany, Italy, and Japan in Central Europe, Asia, and the Americas. Still I hesitated to draw a conclusion from what I had seen and what I felt at the moment. A desire to be completely unbiased in passing judgement on the merits and dangers of fascism restrained me; knowledge of the ultimate object with which the authors of the display had arranged and presented material bolstered that restraint.

As I reached the staircase, I noticed three sculptured figures grouped together at the exit. A peasant (presumably a Loyalist

militiaman) was embracing his wife as he kissed the forehead of the child she held in her arms. Was it for the privilege of serving these three — personifying humanity to my mind—that democracy and fascism must fight until one or the other is defeated, and must I as a democrat perhaps die in such a struggle? Reason stepped in to answer my question. I would not fight against fascism because democracy completely differed from it. Rather, I would cheer the efforts of Hitler and Mussolini in reviving Germany and Italy from a post-war torpor. At the same time, I would not deceive myself with the illusion that either the “self-determination” of a German minority in Czechoslovakia or the defence of British shipping rights in Spain were policies based upon any altruistic motives for the better-

ment of the English or German people.

Beside the statue stood a box in which contributions to relieve suffering in Loyalist Spain were collected. Of all the things I had seen that day—of all the cartographs and maps which attracted my eye, of all the shibboleths and catch-phrases meant to stir my feelings—the simple declaration, “For the Loyalist suffering in Spain,” affected me the most. Here, it seemed, was a plea which did not have as its motive the preservation of one political regime but which was made in behalf of the only worthy cause in the world—the alleviation of human suffering. Two twenty-franc pieces clinked as they struck the bottom of the box.

It was not until I reached the street that I began to wonder whether or not I had been a victim of propaganda.

I Was A Prisoner of The Ogpu

PHILIP MAYER, '42

THE chances are that you have never heard of Tiflis, so I had better start off by explaining that Tiflis is the capitol of Georgia. Not the state of Georgia, where the swing and the tobacco come from, but the Soviet Socialist Republic which lies between the Black and the Caspian Seas at the southernmost end of European Russia. It is a region which is as much Asiatic as it is European.

The *Rustaveli Prospekt* is a fine wide street, the main street in Tiflis, and I was thankful as I sauntered along for the trees which bordered it. It was indeed very hot. I admired the modern steel and concrete buildings, thinking at the same time that the old Asiatic looking houses which still remained along the side streets were somewhat more romantic to the eye of a traveller than these communistic edifices. Soon, I reflected, the architecture of Tiflis will not differ in the main from that of Manchester or Buffalo, N. Y. The inhabitants, however, were still excitingly outlandish in appearance. Mostly they wore short-sleeved embroidered Russian smocks and uncreased slacks. Occasionally a group of men who had come into town from some lit-

tle mountain village would pass wearing tall, curly wool hats. I stopped to take a photo and then moved on. After walking for some five minutes I noticed some people reading a newspaper which was displayed in a glass case on a wall. This, I thought, would make a good picture. Having twiddled the various dials and knobs, I stepped back into a patch of sunlight and aimed at the group. People were walking along the pavement in front of me. I waited, hoping for a gap. Would this pedestrian stream never cease! I cursed softly. The heat rose up from the stones through the thin soles of my rubber shoes. Above my head, the outline of a lamp post danced and shimmered. The sun beat down with an almighty strength. Strollers slowed their step and stared. I glared back. One of the readers turned around, saw me, and touched his neighbour. They both turned and gaped. I lowered my accursed instrument and stood hesitating, wondering whether or not to move on. Somebody addressed me. "*Nee ponimayu, ya inostranyets.*" I replied in Russian, meaning, "I don't understand, I am a foreigner."

By this time I was the centre

of a rapidly growing crowd. Questions were fired at me in what I supposed to be Georgian. My few words of Russian were poor enough, but of Georgian I knew nothing at all. I started to beat an orderly retreat, making non-committal and deprecatory gestures. Three steps was as far as I got. I gathered that they wanted to see my camera. Holding it up, I warded off the grabbing and very dirty hands. One old man laid his hand on my shoulder and addressed me in a slow, distinctly articulated voice. He seemed amazed at my inability to understand him. Slipping from his grasp, I appealed to the crowd. *Was* there no one present who could speak Russian? There was no response. I noticed now that the voices around me had a new tone. What they were angry about I could not understand, but I felt that it was rather up to me to be annoyed. Shouldering my camera, I pushed tentatively at my nearest neighbour, saying at the same time in English, "Will you kindly get out of my way?" Possibly it was my tone of voice that roused their ire. Someone seized me by the arm and pulled me back none too gently. Everybody talked at once.

Suddenly there was a commotion and through the crowd pushed two smart-looking, white-coated policemen. I felt very thankful—for a few seconds; then my relief turned to dismay as it

dawned on me that they wished me to accompany them. I went quietly. As soon as we had turned up a side street, I addressed my guard. "Why?" I asked; and repeated, "Why?" He pointed to my camera and only then did I understand that I was being arrested as a spy.

We turned into a narrow doorway and, passing down a corridor, went up a rickety flight of stairs and entered a room in which a number of young policemen and other miscellaneous officials were eating, reading, or playing chess. I sat down unbidden and took stock of the situation. My feelings were a mixture of fear, anger, and excitement. I reasoned with my fear. After all, nothing could possibly happen to me if only I could tell them what I had been trying to photograph. Still I wished that I had my passport with me and even more did I wish that I could talk Russian with greater fluency. Of course, I reflected, it was a very exciting experience, something to write home about, if I ever managed to get out. After waiting ten minutes, the door opened again and a tall policeman beckoned to me. We crossed the corridor and entered a room at the end of which sat a little man who reminded me of Dr. Goebbels. He was dressed in a grey uniform and he was picking his teeth. For a while he questioned me; very unsuccessfully, as I failed to understand him most

of the time. Whenever I tried to get a word in, he ignored me and went on with his monologue. At the end of this examination I believed that I had made him understand that I was a British tourist, that I was not a spy, and that I would like him to telephone to Intourist, the State Travel Agency, who would vouch for me. This last request I repeated several times until he did indeed lift the receiver and engage in a conversation. Although I listened carefully, I did not recognize the word Intourist throughout the somewhat lengthy parley, and to my questions he would answer neither yes or no. I repressed my annoyance, not wishing to antagonize the man, and for over half an hour we sat there. During the last twenty minutes all attempts at conversation were abandoned

on both sides. Then he went out and I was left in that room for one hour and seven minutes. Had I not been still somewhat nervous I should have done my best to kick down the door.

It was getting dark when the door opened. I was taken by surprise, and all the things which I had thought of saying failed me when I was addressed in German by a soldier in Red Army uniform. "*Sprechen Sie Deutsch?*" said the youth. "*Ja,*" I answered. "You may go," he said in German. "But," I began, and then, as best I could, I vented my pent-up indignation. Dr. Goebbels looked annoyed and spoke sharply to the interpreter. With a shrug of his shoulders the latter interrupted me. "That is how we do things in the Soviet Union," he said. And he was right.

Recommended Books From the Library Acquisitions

JULY TO NOVEMBER, 1938

MISCELLANEOUS

1. Albion, R. G. *Square Riggers on Schedule*. (A study of the organization of the transatlantic sailing ship industry in the early Nineteenth Century—business-like and unromantic.)
2. Daniels, Jonathan. *A Southerner Discovers the South*. (Very favourably reviewed work by a southern journalist who sets out to estimate the validity of the criticisms that have been made of his part of the country.)
3. Drinker, C. K. *Not So Long Ago*. (Medical history.)
4. Halsey, Margaret. *With Malice Towards Some*.
5. Mann, Thomas. *The Coming Victory of Democracy*.
6. Lin Yutang. *The Importance of Living*.
7. Roberts, K. *March to Quebec*. (The historical material on which the editor based his successful historical novels.)
8. Thompson, O. *Debussy*.

ties. (Study of the supporters of England in America, 1770–1780.)

3. Lichtenberger, H. *The Third Reich*. (Serious objective work.)
4. Megaro, G. *Mussolini in the Making*. (Interesting but not objective.)
5. Schussnigg, K. *My Austria*.

SCIENCE

1. Norman, J. R. *Giant Fishes, Whales, and Dolphins*. (Check list and description.)
2. Poincaré, Henri. *The Foundations of Science*. (Collected writings on the logic of science, the scientific method, and related subjects.)

ECONOMICS

1. Scherman, H. *The Promises Men Live By*. (Unusual, but not wild-eyed restatement of economic concepts.)

LITERATURE

1. Barrie, J. M. *The Greenwood Hat*.
2. Barrie, J. M. *The Boy David*.
3. Shepard, O. *Pedlar's Progress*. (Biographical study of Bronson Alcott.)
4. Wilder, T. *Our Town*.
5. Yeats, W. B. *The Herne's Egg*.

HISTORY

1. Brunn, G. *Europe and the French Imperium*. (Study of Europe and the napoleonic dictatorship.)
2. Einstein, L. *Divided Loyal-*

Obituaries

1875

Miles White, Jr., died at his home in Baltimore, Md., on July 5, 1938, in his eighty-third year. He is survived by his widow, a son, and three grand-children.

Educated in private schools in Baltimore, Miles White, Jr., entered Haverford in 1871. He was active in college life, was President of the Everett Society in both 1874 and 1875, and, on graduation, was named "Spoon Man."

Returning to Baltimore, he became actively interested in the Society of Friends, and associated himself with the Five Years Meeting, serving as a member of the Finance Committee and as its Treasurer for fifteen years.

His father, Francis White, was one of the original members of the Boards of the Johns Hopkins Hospital and University, and at his death in 1904, Miles White, Jr., succeeded to those memberships.

From 1904 until his death, he was active in all charitable and philanthropic enterprises in Baltimore. He was a Trustee for the Thomas Wilson Sanitarium for Children, and Chairman of the Western District Board of Charity Organization.

Always active in finance, he served as Finance Commissioner

for Baltimore under Mayor Hayes, and at the time of his death was a Vice-President of the Central Savings Bank of Baltimore.

1881

Albanus Longstreth Smith died at his home, 45 East Penn Street, Germantown, Philadelphia, on Wednesday, November 23rd, in his 80th year.

The son of Horace J. and Margaret Longstreth Smith, he entered Haverford from the William Penn Charter School in 1877, and graduated with the S.B. degree in 1881.

After engaging for a number of years in the structural iron business, Mr. Smith became very active in the Laurel Hill Cemetery Company, identifying himself therewith for fifty years, for forty of which he was General Manager. He also served the West Laurel Hill Company in the same manner.

Mr. Smith was a life-long member of the Society of Friends and of Germantown Meeting, of which he was Recorder of Births and Marriages. He was also, for forty years, Secretary of the Roxborough Home for Indigent Women, and was a member of the Historical Society of Pennsylvania.

Few Haverfordians have been

more quietly loyal than Albanus L. Smith, or, in his modest way, done more to further the interests of the College. Only within the past month he delivered to his classmate, William H. Collins, for deposit with the Collection of Haverfordiana, the Log of 1881, which in recent years he kept up to date with class letters, photographs and items of interest.

Mr. Smith is survived by his widow, two children, Lloyd Mellor, '12, and Elizabeth P. (Satterthwaite), and five grandchildren.

1888

Charles Wilmot Dawson, a former member of the Class of 1888 died at his home in Corpus Christi, Texas, on July 5, 1938.

Mr. Dawson, who had been in poor health for a number of years, was that member of the Alumni Association who travelled the greatest distance in June last, when he returned after more than fifty years to help celebrate the Golden Jubilee of the Class of 1888. His classmates cannot be too thankful that this pleasure was given them.

After leaving Haverford at the close of his Sophomore year, Mr. Dawson studied at the Massachusetts Institute of Technology and, taking up architecture, became a Registered Architect in 1891. He was a Fellow of the American Institute of Architects.

Mr. Dawson resided in a num-

ber of mid-Western cities and was the designer of some of their outstanding public and private buildings. In addition to architectural work he found time for a considerable amount of newspaper work in Kansas City, Denver, and Colorado Springs.

He was active in Rotary, Boy-Scouts, and State Historical Societies. He was a 32nd degree Mason, and a charter member of the Cosmos Club of Corpus Christi.

He is survived by a widow, a sister, and a son, Bernard Hildebrandt Dawson, Head of the Department of Astronomy of the University of La Plata, Argentine Republic.

1936

Allen Clyde Hale died at the home of his mother in Wayne, Pa., on August 22, 1938. He is survived by his wife and his mother.

He entered Haverford from the Haverford School and, pursuing an engineering course, graduated with an S. B. degree in 1936. He then became an employee of Leeds and Northrup, manufacturers of electrical apparatus.

He was Captain of the Wrestling Team in his Senior Year, and his memory will be perpetuated in the Allen Hale Trophy to be given to that member of the Wrestling Team who contributes most to the sport.



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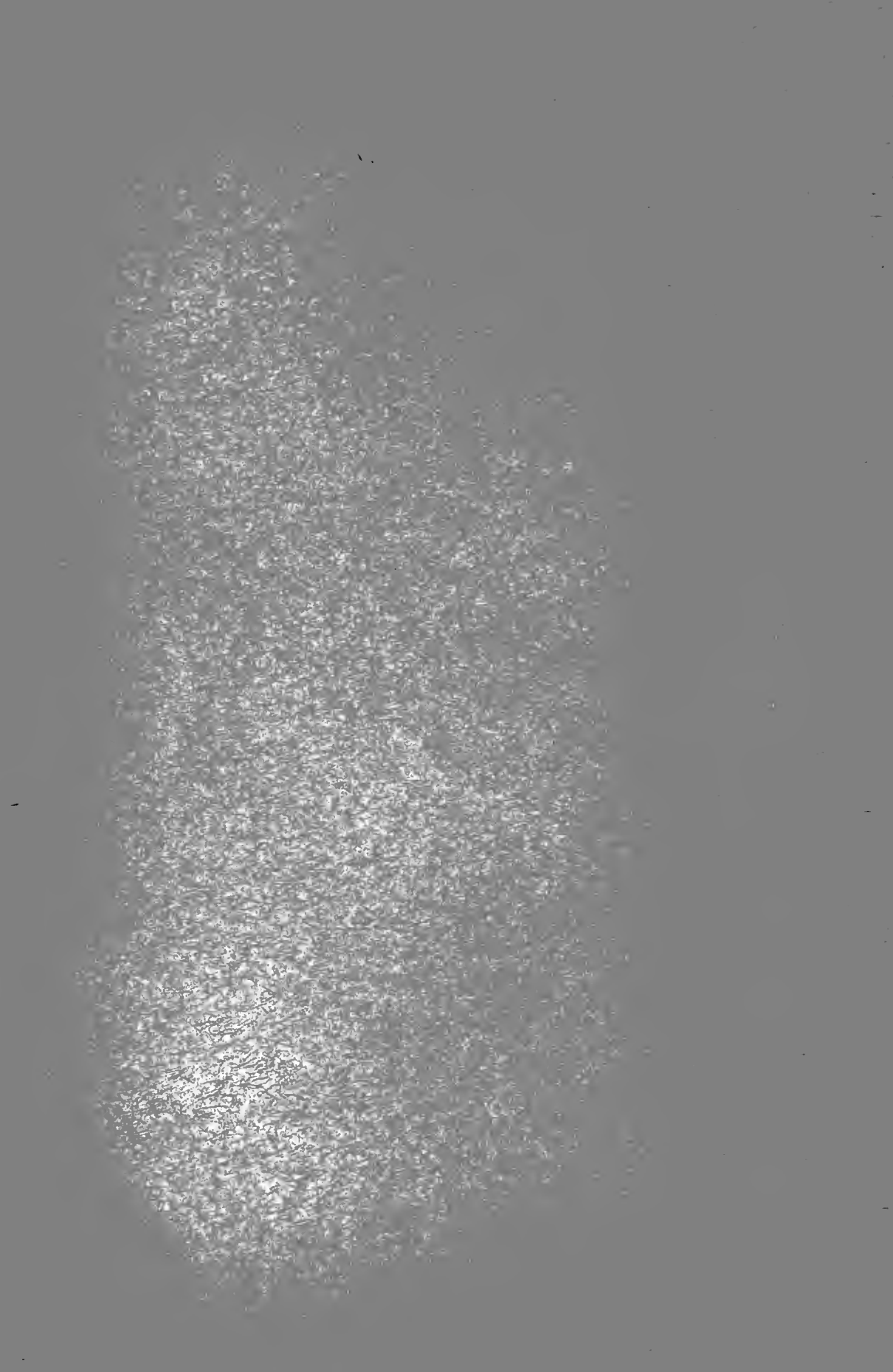
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What Shall We Do With All the Freshmen?

WILLIAM REITZEL, '22

Associate Professor of English, Haverford College.

EVERY English Department in every college or university has tried to answer this question, thinking regretfully as it hunted an answer of the ease with which old ship-masters solved the problem of "What shall we do with the drunken sailor?" But "to put him in the long boat till he gets sober" has never suited either a Freshman or a Freshman's parents.

Anyone who looks through a collection of college catalogues can find the alternatives to "the long boat" that have been proposed; and these alternatives often look splendid in print. But, let anyone talk to members of English Departments, or, better still, to members of other departments and he will learn that what seems splendid in print is generally considered terrible in fact.

The truth is that the normal environment of an English Department is a maze; and in that maze the Department wanders. It has to teach English Literature and it has to teach English Composition. These are two very different tasks. But even teach-

ing Composition is not a simple job. To begin with, are you going to teach the *Art of Composition*, or will you be satisfied with teaching merely the *Act of Composition*? Professionally, an English Department is interested in Composition as an Art; the rest of the faculty is more likely to be interested in Composition as an Act. Incidentally, an English Department itself is not single-minded in this matter; there are times when it, too, is interested in Composition as an Act. When its students take a comprehensive examination or write a term paper, the Department prefers that an efficient act of composition should be performed and has little interest in "creative writing."

A numerical problem is added to this fundamental confusion—an English Department must do something with an entire Freshman Class. And then the numerical problem is made still more complex by the qualitative differences both of training and of aptitude that occur in any normal group of students.

The English Department at Haverford has experienced all possible forms of bewilderment in the course of years, but, five years ago, it undertook a revision of its work for Freshmen, hoping that it might find a solution that would stand for a reasonable period of time. This effort coincided by chance with a series of studies that were being made in connection with the Centenary of the College. A survey became a loosely sketched plan; three years of experiment followed; and then a fully tested and closely knit scheme was put into complete execution.

What happened was, in some ways, startling. To begin with, the Department abandoned a sacred vested interest: it said, in effect, the English work of the Freshman year is the property of the faculty as a whole and not a special preserve of the English Department—What does the faculty want done with it?

What the faculty wanted was rapidly made very plain. They wanted "something" done to students so that when those students were called on to write examinations, reports, or papers, in fact, when they were called on to write anything, they would be able to write them. The faculty cared about little else, although some members gestured politely and said that a course in English Literature was not without its merits. This opinion, accepted

by the English Department, clarified the problem somewhat by limiting it. Composition as an Act and not Composition as an Art was desired. The first plans were drawn up with this as the point of reference.

Further study showed that the Act of Composition desired by the faculty was of a special sort. All students had been studying Composition as an Act for years before they came to college, yet what they had learned appeared to be inadequate. The truth was that the faculty, when it said that it wanted students to be able to write, meant that it wanted them to be able to write in a particular technical form. This particular kind of writing turned out to be dependent, on the following things:

1. A fundamental ability to write simple expositions.
2. An ability to use a modern library quickly and efficiently.
3. An ability to present written work in a standardized form, i. e., knowing how to quote, to use italics, to use footnotes, to make a bibliography.
4. An ability to solve a problem in elementary research, i. e., knowing a procedure for collecting and organizing material.
5. An elementary acquaintance with formal logic.

The only thing left for the Eng-

lish Department to do was to invent a course that fitted these specifications.

At this point the experiments began. No one knew, at first, how much of this material could be got into a semester; or, if it were all got in, how much of it the student could be expected to absorb. The record of overwork and underwork, of groans and psychological resistance is interesting only to those who endured it. The only thing that should be made public is the result.

II.

The College Catalogue states the purpose of the work in English for Freshmen as clearly as it can be stated.

Methods and Techniques of College Work. This course is used to make sure that students have been adequately prepared in the routines that the faculty believes necessary for efficient college work. These routines are specified as follows:

1. A practical skill in expository writing.
2. The use of a Library.
3. The standard forms and principles of documentation.
4. The procedures of elementary research.
5. An elementary knowledge of logical methods and their occurrence in college work.

Students can obtain release from this work as soon as they have satisfied the instructors of their proficiency . . . No numerical grade is recorded . . . the student is registered as Satisfactory or Unsatisfactory.

A statement, in similar form, is also made of the Department's

work in Public Speaking; and then it is added that these two courses, "although under the direction of the English Department, are fundamental to the entire curriculum of the College and not only to the English Department's plan of courses in literature."

Behind this statement lies the fact that the aim of this work in Composition is tangible, limited, and severely practical. Unlike many statements of intention made in college catalogues, this one is capable of being achieved. Above all, it implies that Composition is steadily regarded as an Act, not as an Art; as a tool, not as a device for emotional self-expression; and that it is "a duty and not a virtue" to perform the Act and use the tool efficiently.

Every man in the Freshman Class is given a Checking Examination before the opening of College. This examination, a purely objective one, covers the use of a library, the preparation of manuscripts, and elementary logic. It is meant to uncover the extent and adequacy of the student's preparation.¹

From this point on, the work of the course looks two ways. On the one hand, the process of checking actual training and ability continues; on the other,

¹ The average score for this examination, over a period of three years has been 18. A perfect score is 50.

a process of repairing the deficiencies of individual students begins.

A series of formal lectures, followed by detailed examinations in which accuracy of 90 per cent must be achieved, begins to build up the student's knowledge of the techniques he will be expected to use. At every step this knowledge must be available at a practical level. It is not enough that a student should have memorized what the lecturer has said about a library. He must take a series of problems and solve them, and he must continue to do this until he can work accurately against time. The lectures, and the "check-ups," and the repetitions cannot be got through in less than seven weeks. At the end of that time, a Second Checking Examination, similar to that taken at the beginning of the year, is given.²

While this part of the work is going on, the student's skill in expository writing is being tested. He writes three papers during the first seven weeks, each assignment rapidly stepping-up the demand made on him in respect to length, preliminary collection of material, and complexity of organization. Each of these papers is analyzed from three points of view: (1) the

degree of habitual skill shown in using the English language for purposes of expository writing, (2) the organizing capacity of the student's mind, and (3) the use the student is making of the techniques in which he is being simultaneously instructed. A detailed record is kept of each student's work during this period.

The Department, however, regards these papers primarily as a means of estimating the student's ability. No special effort is made at this point to correct any deficiencies that may be uncovered. The Department wants to know only one thing—how well equipped is each student to do the particular kind of writing that college work will demand of him? By concentrating on this one question, and by strong-mindedly rejecting all temptation to be either amusing or improving, the Department is actually in a position to judge each student accurately at the end of the first quarter of the college year. In addition to this, the Department is also able to say exactly what must be done with a deficient student to bring him up to the standard required for the work he will be expected to do.

Superficially, the judgment that is made at this point is a simple one. A student is reported as either "Satisfactory" or "Unsatisfactory." The former means that the English Department has

² The average score for this second examination, over a period of three years, has been 41. A perfect score is 50.

every reason to think that the student will not be prevented by inefficiency in the Act of Composition from doing adequate work in any college course. It does not mean that such students may not frequently do careless, stupid, or incompetent work; it only means that they have given away to the English Department the fact that they can do careful, reasonable, and competent work.

"Unsatisfactory," on the other hand, means that the Department has reason to think a student needs definite corrective work. The intention of the whole course, therefore, shifts at this point and becomes a process of bearing-down on specific and clearly indicated deficiencies.

Before going on to describe this part of the work, an interesting and perhaps unique feature of the whole plan ought to be mentioned. Those students who are certified as "Satisfactory" at the end of the first quarter are released from all further instruction. They have proved their competence to do a particular job and beyond that the Department is not interested in them at this moment. They are free to give their time and attention to the four remaining courses they must take as Freshmen. The Department does not try to make them more competent. It assumes that an increase of skill will come more naturally and more rapidly in connection

with the actual concrete demands of college work than it will from any instruction in the abstract.³ The reduction of numbers, incidentally, makes corrective work much more possible.

This work follows no strict routine. It varies with reference to individual difficulties, though in practice it usually takes one of three forms. Some students have not thoroughly acquired the mechanical techniques: for them drill sections are organized. Others, and these by far the greatest number, have shown in their written work small defects of either organization or style. They are required to analyze and correct the papers they have already written, and the final judgment of their ability is based on the skill they show in improving their own particular faults. A third and small group gradually show that their preliminary training has been seriously defective.⁴

The Department has no machinery for dealing with students who fall into this category. It does what it can during the second semester of the Freshman year, but this is admittedly little because it is impossible to cure rapidly defects that are the consequence of years of ineffective training. As far as it reasonably

³ The number thus certified has averaged 18 per cent over a period of three years.

⁴ This group has averaged 4 in number over a period of three years.

can do so, the Department places the problem where it properly belongs, on the student and on his parents. It recommends tutoring and refuses to certify the student unless the tutoring is seriously undertaken and produces results. If tutoring is out of the question, the student is made to repeat his Freshman work in Composition, though this alternative has never been very satisfactory.

The work done in Public Speaking, though not deliberately geared to the work in Composition, is approached from the same point of view. An effort is made to see that every student is equipped with an ability to speak as he will have to speak in order to do college work effectively, that is, recite in a classroom and make oral reports. The method is a combination of analyzing present ability and correcting obvious defects. It differs from the work in Composition in that it attempts general improvement even of the best students. Hence a student is not released from this work even when he has shown himself to be up to an acceptable minimum standard.

The work that has just been described will appear to all those who have any knowledge of what normally makes up a college course in Composition as limited in scope, routine in method, and indifferent to those finer shades of feeling and culture that stu-

dents are generally supposed to be seeking. Frankly, compared with many such courses, these are precisely the features that make this course effective. There is nothing in it that is not severely practical, nothing in it that is not completely adjusted to the student's immediate needs. In addition, there is nothing in it that is muddled or confusing.

However, bread alone is unpalatable even if nourishing. In every Freshman Class there are a limited number of students who have a special interest in writing for its own sake—in Composition as an Art. Their enthusiasm would get a sharp set-back if they were forced through a routine that had been developed for instructing large numbers.

So, each year, the Dean of Freshmen and the English Department prepare a list of students who, on the basis of their records, can justifiably be excused from the routine. These students, if they wish to do so, form a small class called English IA, and in that special course Composition is studied both as an Art and as an Act.

One final point must be mentioned. The success of the plan that has just been described depends on keeping the qualitative variations in any given Freshman Class within fairly narrow limits, that is, the minimum standard for acceptance must be

high and must be held to with a bull-dog's grip. If the average number of inadequately prepared students turned out to be twelve rather than four, the plan would not be effective. This is controlled by carefully watching the College Entrance Examinations and the Scholastic Aptitude Tests, and by making an ability to write efficiently a key factor in the acceptance of a student.

The administration, the faculty, and the Department of English

have been in such complete agreement on this matter that at no time in the past five years has the Department had to struggle with impossible conditions. This fortunate position has enabled Haverford College to build up a course in Composition for Freshmen that is not divorced from "real life" and that shows signs of being able to produce a student body that is unusually well qualified to use the tools needed for college work.

The Commission-Manager Form of Government

BERT C. WELLS, '04

City Manager, Wichita, Kansas

FOR many years, large privately owned corporations have been organized and operated by the stockholders electing a Board of Directors, the Directors employing a General Superintendent or Manager who in turn would employ department heads and employees and attend to the details of the business under the general supervision of the Directors.

Governments, however, have been hesitant to change the form they originally adopted, even when a vast majority of their citizens, as stockholders, realize that the form is inefficient and in many ways not satisfactory. Anything new is branded as undemocratic and discarded, and, too, political leaders like to retain their patronage and special privileges. The citizen-stockholders will stand for and elect directors but question their employing a trained executive or manager and entrusting to him the operation of the largest corporation in the community, their government.

A factory,^e department store, or a bank would not think of employing as manager a stock-

holder who knew little about the operation of the institution; yet in government we insist that one of our number, a good handshaker, though entirely ignorant of the technique of government, be placed at the head. It is little wonder that a well-known foreign diplomat once said that American cities are the worst governed cities in the world. This condition is not new. Plato once said, "Whereas in simpler matters—like shoe-making—we think only a specially trained person will serve our purpose, in politics we presume that any one who knows how to get votes knows how to administer a city or a state."

The functions of government have multiplied manyfold since Plato's day, but government has not advanced in form and personnel to keep pace with these added obligations. City government is now in the process of evolution and no doubt the best type has not yet been evolved. Advances are being made and, with the interest shown in government by so many colleges and universities, the management of cities, counties, states and the

nation will soon measure up to, if not surpass, that of private business institutions.

The Commission plan was first successfully tried out in Galveston, Texas, in 1900 following a disastrous storm that left the city bankrupt. The plan was such an improvement over the old Mayor-Council form that many cities soon were operating under it.

The advantages of this plan were:

Simplification through the short ballot.

More businesslike transaction of city affairs.

More definite fixing of responsibility.

Increased interest of citizens in public affairs.

The disadvantages were:

The city had three to seven heads instead of one.

The commissioners selected often proved to be poor administrators and sometimes absolutely ignorant of the operation of their departments. Switchmen, barbers, dentists, etc., awoke suddenly to find themselves the active head of a Police, Fire or Finance Department.

The city of Staunton, Virginia, was the first to institute the City Manager plan. The idea was well expressed in a report made by a citizens' committee, "Let the City Council appoint as general manager some competent and suitable man and delegate to him the entire control of the city's

executive and administrative affairs." The plan was put into effect January 16, 1908. Sumter, South Carolina, adopted the plan in 1912. There are now 451 professionally managed cities and 7 managed counties scattered through 38 states.

The main features of the Commission-Manager plan are set out in a recent bulletin of the International City Managers Association, as follows: A small Commission or council elected at large on a non-partisan ballot determines all municipal policies which are not set forth in the charter itself, adopts ordinances, votes appropriations, and is required to appoint a chief executive officer called a city manager. The council is the governing body of the city, and the city manager is its agent in carrying out the policies which it determines. The mayor, who is usually elected by the council from its own number, does not interfere with the administrative functions of the manager, nor do individual members of the council. It is definitely understood that the council deals with administration only in a formal manner through ordinances and resolutions, and that administrative functions are at no time delegated to committees or individual members of the council.

The city manager, the head of the administrative branch, is appointed by the council as a

whole. The theory is, and the charter usually provides, that he be selected on the basis of his training, ability, and experience. The exercise of all administrative authority is concentrated in this appointive executive who is accountable to the council. He provides the council with information which enables it to determine municipal policies, advises the council in matters of policy if the council so desires, and executes the policies determined by the council. He introduces the best principles of advanced administrative organization and practice, and is held responsible for the proper co-ordination of all administrative activities under his direction.

The duties of the city manager as set forth in most council-manager charters, broadly stated, generally include the following:

1. To see that all laws and ordinances are enforced.
2. To exercise control over all departments and appoint, supervise and remove department heads and subordinate employees of the city.
3. To make such recommendations to the council concerning the affairs of the city as may seem to him desirable.
4. To keep the council advised of the financial condition and future needs of the city.
5. To prepare and submit to the council the annual budget.
6. To prepare and submit to the council such reports as may be required by that body.
7. To keep the public informed, through reports to the council regarding the operations of the city government.

A State Law embodying these features was passed by the Kansas

Legislature in 1917. Two cities Wichita and El Dorado, voted to adopt the Manager Plan soon after the passage of the law. Since I had been City Engineer of Wichita for ten years, I applied for and was appointed City Manager of El Dorado. This turned out to be a tough assignment. El Dorado was in the midst of an oil boom. The city had grown in two years from a quiet agricultural county seat of 2,500 population to a money-mad city of 20,000. Housing facilities were inadequate, many lived in tents and shacks. My family of four lived in a seven-room house occupied by four other families. Sewers, Water, Gas, and all utilities were overloaded. Five hundred cases of typhoid fever were reported the first year and the 'flu epidemic of 1918 did not pass us up. Experience was acquired rapidly during my four years as Manager of El Dorado. In 1921 Atchison, Kansas, adopted the plan and I was selected as its first Manager. Here the problem was financial debt and my six years there were less strenuous than at El Dorado. In 1927 the City Manager of Wichita resigned and I was successful in my application for the position.

After thirty-two years of continuous public service I am stronger than ever for College Trained Men and Women and for "in-service" training. We no longer put raw recruits on the

Fire Department or Police Department; advanced education is a requirement. Many of our Police Officers are college graduates. We put recruits through intensive training before assigning them to duty, and then we require continuous "in-service" training.

The time is here when a government official must be more than a good fellow and a handshaker; he must know the requirements of

public service, have the ability and the will to render that service, and then perform his duties as a public servant and not as a Dictator. The successful public official of tomorrow will be specially trained for that service. He will look upon Public Service as a career, "an honorable occupation which one normally takes up in youth with the expectation of advancement and pursues until retirement."

Haverford in Education

FOR a small college, Haverford has made rather a large contribution to the personnel of American education. The records in the College office will not give us perfect information; for changes are constantly in progress. But the following statistics are correct so far as our information reaches.

The list of past and present college presidents who have received Haverford degrees are:

L. L. Hobbs, '76, Guilford; Thomas Newlin, '85, Guilford, Whittier; I. H. Brumbaugh, '92, Juniata; W. W. Comfort, '94, Haverford; W. O. Mendenhall, '01, Friends' University, Whittier; H. E. McGrew, '04, William Penn College; J. U. Ly, '17, Chiao Tung University, Shanghai; Clyde E. Milner, '22, Guilford.

The following men have served in the past or present in important administrative positions. Those marked with an asterisk (*) are, to the best of our knowledge, still in service:

Clement L. Smith, '60, Dean of Harvard College; James H. Tyson, '60, Dean of University of Pennsylvania School of Medicine; William Draper Lewis, '88, Dean of University of Pennsylvania School of Law; Walter M. Hart, '92, Vice-President of University of California, and Dean

of the University Faculties; *Roswell C. McCrea, '97, Columbia University, Dean of the Faculty of Business; *Richard M. Gummere, '02, Harvard, Dean of Admissions; José Padin, '07, Commissioner of Education for Porto Rico; *Dudley D. Carroll, '08, University of North Carolina, Dean of the School of Commerce; *Edward S. Thorpe, Jr., '18, Assistant Dean, University of Pennsylvania, School of Medicine.

In pure scholarship, the following Haverfordians have attained national distinction:

A. M. Elliott, '66 (Johns Hopkins University), Romance Languages; Henry Wood, '69 (Johns Hopkins University), Germanics; Francis B. Gummere, '72 (Haverford), English; Rufus M. Jones, '85 (Haverford), Philosophy; A. T. Murray, '85 (Stanford), Greek; Clement L. Smith, '60 (Harvard), Latin; T. W. Richards, '85 (Harvard), Chemistry; George A. Barton, '82 (Bryn Mawr), Biblical Literature; Henry J. Cadbury, '03 (Harvard), Biblical Literature; Walter M. Hart, '92 (California), English; Francis G. Allinson, '76 (Brown), Greek; Warner Fite, '89 (Princeton), Philosophy.

It is, however, in the far-flung list of colleges and universities that Haverford's representation at the present time in the Faculties is most impressive. If our

records are correct, there are Haverfordians now on the Faculties of the following universities:

Buffalo, California, Chicago, Columbia, Cornell, Delaware, Duke, Friends, Fukien (China), Harvard, Iowa, Johns Hopkins, Kansas, Lincoln, Louisiana, McGill, Maryland, Michigan, Minnesota, Mississippi, Nebraska, New York University, North Carolina, North Dakota, Northwestern, Ohio State, Oklahoma, Pennsylvania, Pittsburgh, Princeton, Purdue, Richmond, Rutgers, Stanford, Syracuse, Temple, Vanderbilt, West China, Wichita Municipal, Wisconsin, Yale.

Haverfordians are to be found on the Faculties of the following colleges:

Antioch, Allegheny, Bennington, Bowdoin, Bridgewater, Brethren, California, Agricultural, Dickinson, Drexel, Earlham, Gettysburg, Goucher, Grinnell, Guilford, Hamilton, Haverford, Iowa State Teachers, Kansas State College, Kenyon, Lafayette, Miami, Michigan State College, Mt. Union, Nebraska Central, Oregon State, Pacific, Penn State, Pomona, Swarthmore, Ursinus, Washburn, Washington and Lee, Wells, Wesleyan, Whittier, William Penn, Wilmington, Wooster, College of the Pacific.

In the field of private schools, the following have Haverford headmasters at the present time:

Friends' Select School, Philadelphia; Friends' School, Washington; Germantown Friends' School; Iolani School, Honolulu; Moses Brown, Providence; Park School, Baltimore; Fountain Valley, Colorado Springs; Oakwood School, Poughkeepsie; Pawling School; Perkiomen School; Friends' School, Wilmington.

As nearly as can be estimated, the number of Haverfordians teaching in schools is about 100, and in colleges and universities, about 125. They are to be found in practically every subject in the curriculum, and appear to be quite evenly distributed between the various so-called Arts and Sciences. The supply continues, for every year a substantial fraction of our better scholars seeks the graduate schools to prepare themselves for further study for the profession of their choice.

Oil and Exploration

B. B. WEATHERBY, '21

Geophysical Research Corporation, Tulsa, Oklahoma

THERE are few, if any, great industries where the replenishment of raw materials is a more serious problem than it is in the petroleum industry. This must be accomplished in the face of constantly mounting consumption which recently has topped a billion barrels a year. The problem is further aggravated by the fact that, unlike the metals, which can be melted down and refabricated, oil can never be used again. Once burned in car or furnace it forever disappears. The only way that the billions of dollars invested in refineries and transportation facilities, equipment and leases can be protected is through huge reserves of oil in the ground.

It became apparent some fifteen years ago that existing methods of exploration could not keep pace with the growing demand for petroleum and its products. Moreover, the industry was in the unhealthy state of a hand-to-mouth existence. The discovery of one good-sized pool was sufficient to throw the price structure out of balance since the wells were allowed to flow to capacity, and the oil was dumped on the market. This period of over-production

did not endure for any length of time since natural decline very shortly overtook the new fields, and a period of oil shortage, with rapidly rising prices, followed, when company executives wondered almost literally as to the whereabouts of the next barrel of oil. Some lucky wildcatter would then drill in a gusher and the process was repeated. However, the chances of success in such random drilling were very small, consequently this method of discovery of new reserves was quite inadequate. Surface and sub-surface geology were being worked to the limit to find structures favorable for the accumulation of oil but still reserves were diminishing. Thus the stage was set for the entrance of geophysics into the oil business, where, if successful, it might be able to accomplish the two-fold purpose of stabilizing the industry and providing additional reserves of oil in the ground. Fortunately for those of us who entered the geophysical field early, the first concentration of effort was in the Gulf Coast of Texas and Louisiana where the exploration problems turned out to have relatively simple solutions. Here oil was

usually found in the sediments surrounding large plugs of salt, roughly circular in shape and from one to two miles in diameter. These salt domes occasionally came to the surface but more often were buried, some of them quite deep. Two physical properties, namely lower density and higher velocity, distinguished them very markedly from the surrounding sediments. It was on these distinctive properties that the early geophysical work was based.

The lower density was taken advantage of by using a torsion balance. This instrument, invented by Baron Eötvös, was simply a modification of the balance used by Cavendish to weigh the earth. It measured unbelievably small variations in the force of gravity and indicated a slightly lower value of gravitational attraction in the vicinity of one of these buried domes. There were certain disadvantages to its use, however. It was quite slow in operation and had to be placed on a firm foundation in order to eliminate all vibration. This precluded its use in the marshy and swampy parts of the coastal area where many domes were supposed to exist. Although the torsion balance found many domes and aided considerably in solving exploration problems, there still existed a need for a more rapid reconnaissance method which could

be adapted to hitherto inaccessible regions.

The high velocity of the salt made an ideal situation for the use of the refraction seismograph. A limited amount of earlier work had been done with this method on problems of measuring the velocity and configuration of different rock layers *in situ*, but real development dated from its use in finding domes. Briefly, the method was practiced in the following manner. In a hole some twenty feet deep was planted a substantial charge of dynamite. Several units, each consisting of a detector together with amplifying and recording equipment, were stationed about a mile apart and roughly equidistant from the shot point which was some five miles away. The equipment at each station was in charge of trained technicians who communicated with each other by radio and when the earth unrest caused by the wind, automobiles, tractors, etc., was relatively small, fired the shot. The vibrations in the earth caused by the explosion were picked up by the detectors and after amplification were recorded by the camera. From this record, the time consumed by the wave in traveling between shot point and detector position was obtained. The velocity of the wave could then be calculated since the distance between the shot and detector was known. If approximately ten

thousand feet per second was calculated, then the area traversed by the wave was normal, for this was the velocity of Gulf Coast sediments. If, however, a velocity of fifteen thousand feet per second was obtained, then a dome had been found. It was necessary for the earth to be extremely quiet in the vicinity of the detectors since the amplification of the system was so great that earth vibrations having an amplitude of a millionth of an inch were clearly recorded. On one occasion a detector indicated considerable unsteadiness. A careful investigation disclosed that it had been planted near an ant hill and several of these insects were making a tour of inspection of the instrument.

Because of the novelty of the technique and instruments, and because of the enormous stakes involved in case of a discovery, (a new salt dome at that time was worth approximately a million dollars) every effort was made to conceal the location of a crew in the field, as well as its *modus operandi*. These efforts were partly nullified by the elaborate scouting system set up by the major companies. Frequently when a crew left town in the morning, it would be followed by several scouts, each representing a different oil company. These men watched every move hoping that some irregularity in operations would disclose either the

discovery of a dome or some improvement in field technique or equipment. This scouting system went much further than the observation of crews in the field. This was forcibly brought to my attention on one occasion when it became necessary for us to shoot a small area as quickly and as secretly as possible. Our crew had been moved into Houston one afternoon and the men were staying at a hotel with no idea where they were to go the next day. They had, as usual, been followed into the hotel by a scout, whom we knew would be waiting at the garage early the next morning in order to follow them to the field. At two o'clock in the morning the men were awakened and told to leave quickly and to assemble their cars at a certain point on the outskirts of town. An hour later I met the whole outfit and told the Chief to go to Galveston. The only instruction given the rest of the men was to follow the leader. I then proceeded ahead of the crew, quite confident that on this occasion, at least, we had managed to evade the scout. Imagine my surprise when, at four o'clock in the morning, while crossing the bridge which leads into Galveston, I was suddenly stopped by a man who said pleasantly, "I thought perhaps I could show you your way around town. I will take you to the best hotel." It was the same scout who had been

following this crew for weeks. How he learned of our plans will remain a deep, dark mystery.

The refraction method met with remarkable success in forcing the vast swampy and marshy area of southern Louisiana to give up its secrets. Equipment was mounted on boats, barges, marsh buggies or, in fact, on anything that could be moved through this low-lying country of seemingly limitless marsh, dotted with shallow lakes and criss-crossed with bayous. The Cajuns, who inhabit this region, are a primitive native people. They proved invaluable as guides because of their uncanny sense of direction.

On one occasion several tons of dynamite had been stored on a barge out in the middle of one of the larger lakes and we had made arrangements with one of these natives to meet us there. Approaching the barge the following morning imagine our surprise and consternation when we saw our Cajun not only sitting on top of the dynamite but calmly knocking out his pipe against a stick of the explosive.

The area to which the refraction method could be applied was not unlimited, however, and it was soon apparent that the usefulness of the seismograph would have to be extended if it was to survive. During the course of the refraction work, experiments on the reflection of artificial

seismic waves were being conducted. The big question was whether energy, released from an explosion, would travel deep into the earth and after reflection from either harder rocks or from some other type of elastic discontinuity, would return to the surface with sufficient amplitude to be recorded and recognized. After considerable effort the tricks necessary to accomplish this feat were learned, and thus another and far more powerful tool was added to the exploration field. In this case it was possible to calculate the depth of the reflecting points. By scattering these depth determinations over an area, the configuration of the subsurface reflecting horizon would be known and structures, favorable for the accumulation of oil, disclosed. Starting from scratch ten years ago, the method has become so universal that there were over two hundred reflection crews in operation last year. This clearly illustrates the commanding position taken by the reflection seismograph in the field of exploration, for the petroleum industry would not support such a program costing several million dollars a month unless concrete results were being obtained.

Unfortunately for the price of crude oil, the last mentioned method came into being at about the same time as the discovery of the huge East Texas field. The result was to flood the market

with oil and since this happened concurrently with the 1929 depression, it was all the more disastrous, for under this combination the price fell as low as ten cents a barrel. Because of this ruinous situation every effort was made to stabilize the industry and to meet the changed conditions induced by growing reserves. It was quite apparent that oil must be kept in the ground and not produced regardless of consumptive needs. Interstate compacts were formed for the purpose of restricting the outputs of the different states, and wells were prorated so that they were only allowed to produce a small percentage of their capacity. A well quite able to flow five thousand barrels a day was restricted to a small fraction of this amount. This was not an unalloyed hardship since the gas in the field was conserved, thereby adding to the

amount of oil which would ultimately flow from the reservoir. Along with this restriction in production, a more orderly development of newly discovered pools has occurred. Deeper and deeper production, from wells drilled to depths unheard of a few years ago, has added notably to reserves. The world's record is a well drilled to 15,000 feet in California. Tremendous strides have been made in refining so that the barrel of oil of today can produce twice as much gasoline as a few years ago. Not only has science come into the exploration end of the business, but into every other phase of it as well, and the net result of all these technological improvements is that with the largest rate of consumption of oil in our history the future is being faced with the greatest proven reserves of all time.

Seedbed of the American Renaissance

L. CROSBY LEWIS, '39

(The following article is a summary of material that can be found stated at greater length in the catalog of St. John's College and in a pamphlet on the New Program, by President Barr, of St. John's. The quotations are directly from these sources, while much of the remainder is simply a paraphrase of the original.)

SURELY, it is an extraordinary fact," wrote Walter Lippmann, in a recent column in the New York *Herald Tribune*, "that during the past sixty or seventy years the European peoples and their descendants in this hemisphere have arrived at last at that full recognition of their personal dignity, which is called freedom — at equality before the law, at government under the law, at the right to be represented in the making of the law and to be consulted in the administration of the government—and then, though the emancipation of mankind had hardly been consummated, the grandchildren of the emancipators became persuaded that happiness was incompatible with freedom. This," continues Mr. Lippmann, "is the riddle of our epoch," and he believes it to be the primary problem of this generation. All efforts to solve it have been bungling, Mr. Lippmann believes, as a result of the woefully inad-

equately training of those attempting the solution. But, he concludes, there is one place in the country where young men are being trained adequately to deal with the problem, namely, St. John's College, Annapolis, Maryland; and he prophesies that "in the future, men will point to St. John's College and say that there was the seedbed of the American Renaissance."

St. John's College is the third oldest college in the United States, younger only than William and Mary and Harvard. As a small institution in a rapidly changing and expanding country, its career has been a stormy one. Like many of its fellow small colleges it ran an increasingly unsteady course through the depression, frequently changed its administration, and in 1937, laden with debt and facing the possibility of closing down, turned in desperation to the Liberal Arts Committee of the University of Chicago "for advice and succor."

In June, 1937, the Board of Visitors and Governors of St. John's elected as President, Stringfellow Barr, formerly Professor of Modern History at the University of Virginia, and as Dean, Scott Buchanan, formerly Professor of Philosophy at the University of Virginia. Both men were at the time of their election members of the Committee on Liberal Arts at the University of Chicago. But what is more important was that both men had been for many years engaged in working out various plans for "rediscovering the Liberal Arts" and when they came to St. John's they had with them the fully evolved educational program, which has become known throughout the American academic world as the "New Program of St. John's."

To understand the fundamentals of the "New Program," let us quote from President Barr: "The New Program which twenty freshmen embarked on in September, 1937, was based on several fundamental rediscoveries of what a liberal education is and on the pooled experience of teachers at Columbia, Chicago, Virginia, and in adult education in New York. The student ought by graduation to have achieved a disciplined mind, and such an achievement implied a quickened imagination, the power to reason clearly, the capacity to apply theory in practice. *In addition to being able*

to read, write, and reckon more skillfully and fruitfully than the American college graduate of today commonly does, in addition to being able and willing to face real problems, he should be able to recognize those eternal problems which his ancestors faced before him and which recur for every generation of human beings. Experience had taught that the best statement of those problems are the classics of human thought. And since the student, whether he likes it or no, will have to do his thinking and feeling in the great European tradition to which he was born, his best chance of discovering himself lies in claiming his natural heritage—the wisdom of that tradition. For that wisdom he would have to turn, not to college textbooks which discussed it at second hand, but to the classics, the great books, both of ancient and modern times. There in the company of great minds he would learn to deal with great problems."

The fruit of two decades of study and revision of lists of "great books" on the part of President Barr, Dean Buchanan, and the teachers referred to above was the now well-known "St. John's book list," which is included at the end of this article.

The basic requirement for a bachelor's degree at St. John's is the "reading and maximum understanding of these books." This is accomplished largely through seminars and formal ex-

pository lectures. "But," to quote President Barr again, "books like Euclid involve detailed drill in small classes. And to supplement the theoretical statements in the mathematical and scientific 'classics,' whether ancient or modern, the student has recourse to another type of classic than books—namely, laboratory instruments. St. John's students have been busy constructing their own home-made balances, their own thermometers, their own sonometers." Lastly, in order to understand more thoroughly the "great books," there is instruction in languages. Thus, although all the books are read in the best English translations available, the student is required to study Greek, Latin, French and German, so that he may refer intelligently to the original in order to give greater clarification to the more obscure passages. Both the language and laboratory courses continue throughout four years.

The principal objection to the New Program came from those who advocate colleges giving a specific training that can be directly related to a later career. In answer to these critics, President Barr writes, "How should a student trained this way earn his living? The answer to this question is complicated. If a free, disciplined mind prevents a young man from earning bread, then the St. John's Program is

genuinely dangerous to boys without private income. But does it? If, on the other hand, liberal education is to be judged by the standards of vocational or professional training, then the problem is insoluble. It is because liberal education has another purpose that the better professional schools are so anxious that their students should possess a broad intellectual basis before they embark on specialized studies."

To the question of whether or not the student should be allowed to pick his courses at will, President Barr answers an emphatic negative. The assimilation of the material contained in the "great books" constitutes the essential subject matter for a balanced education, and since it requires a full four years for the student to cover that material, the question of "free electives" simply does not arise.

If we pause to consider, the very fact that such criticisms as the above could be made indicates how far from the ideal of the "liberal arts college"—so frequently and emphatically supported by the Founding Fathers of this Republic—we of later and more confused days have come. What, after all, is a liberal arts college? In the days of Dante's *Divine Comedy* and St. Thomas Aquinas' *Summa Theologica*, the liberal arts consisted of the *Trivium*, composed of Grammar, Rhetoric and Logic, and the

Quadrivium, composed of Arithmetic, Geometry, Music and Astronomy. Today, at the end of a so-called "liberal education," we award the traditional degree of Bachelor of Arts. And yet as President Barr aptly points out, "it is not an exaggeration to state that few faculty members of any college today could name the arts referred to"—let alone define what was meant by "music"! To define a liberal education, he continues, "Perhaps we can state the matter most clearly here, by noting that, the liberal arts are the arts of thinking and knowing; that men think and know by means of symbols; that our symbols are of two chief sorts, words and numbers; that the liberal arts, therefore, involve an understanding of language and mathematics; or, put very simply, the liberal arts are the arts of reading, writing and reckoning. Some of the great books on the St. John's list analyze those arts; all of the books exemplify their expert use. Mastery of the liberal arts makes a liberal education, an education that liberates the human mind, that frees it in the only way that human minds are ever freed, through intellectual discipline."

St. John's College, with its New Program, is an avowed attempt to train the young men of this generation, through a close study of the ever-recurrent problems of humanity, so ter-

ribly foreboding in this Year of Grace, 1939. As such, it more than merits the close attention and admiration of all students of today.

ST. JOHN'S BOOK LIST IN CHRONOLOGICAL ORDER

Homer: *Iliad* and *Odyssey*
 Æschylus: *Oresteia*
 Herodotus: *Histcry*
 Sophocles: *Ædipus Rex*
 Hippocrates: *Selections*
 Euripides: *Medea* and *Electra*
 Thucydides: *History of the Peloponnesian Wars*
 Aristophanes: *Frogs, Clouds, Birds*
 Aristarchus: *On the Distance of the Sun and Moon*
 Aristoxenus: *Harmony*
 Plato: *Meno, Republic, Sophist*
 Aristotle: *Organon* and *Poetics*
 Archimedes: *Works*
 Euclid: *Elements*
 Apollonius: *Conics*
 Lucian: *True History*
 Plutarch: *Lives*
 Lucretius: *On the Nature of Things*
 Nicomachus: *Introduction to Arithmetic*
 Ptolemy: *Almagest*
 Virgil: *Æneid*
 Strabo: *Geography*
 Tacitus: *Histories*
 Cicero: *De Officiis*
 Horace: *Ars Poetica*
 Ovid: *Metamorphoses*
 Quintilian: *Institutes*
 Marcus Aurelius: *To Himself*
The Bible
 Galen: *On the Natural Faculties*
 Plotinus: *Enneads*
 Justinian: *Institutes*
 Augustine: *De Musica* and *De Magistro*
Song of Roland
Volsunga Saga
 Bonaventura: *On the Reduction of the Arts to Theology*
 Thomas: *Summa Theologica*
 Dante: *Divine Comedy*
 Roger Bacon: *Opus Maius*
 Chaucer: *Canterbury Tales*
 Leonardo: *Note-books*
 Erasmus: *Colloquies*
 Rabelais: *Gargantua*

- Copernicus: *De Revolutionibus*
 Machiavelli: *The Prince*
 Harvey: *On the Motion of the Heart*
 Gilbert: *On the Magnet*
 Kepler: *Epitome of Astronomy*
 Galileo: *Two New Sciences*
 Descartes: *Geometry*
 Francis Bacon: *Novum Organum*
 Hobbes: *Leviathan*
 Montaigne: *Essays*
 Cervantes: *Don Quixote*
 Shakespeare: *Hamlet, King Lear*
 Calvin: *Institutes*
 Grotius: *The Law of War and Peace*
 Corneille: *Le Cid*
 Racine: *Phèdre*
 Molière: *Tartuffe*
 Spinoza: *Ethics*
 Milton: *Paradise Lost*
 Leibniz: *Mathematical Papers*
 Newton: *Principia*
 Lavoisier: *Elements of Chemistry*
 Boyle: *Skeptical Chymist*
 Montesquieu: *The Spirit of the Laws*
 Swift: *Gulliver's Travels*
 Locke: *Essay Concerning Human Understanding*
 Voltaire: *Candide*
 Fielding: *Tom Jones*
 Rousseau: *Social Contract*
 Adam Smith: *Wealth of Nations*
 Hume: *Treatise of Human Nature*
 Gibbon: *Decline and Fall of the Roman Empire*
 Constitution of the United States
 Federalist Papers
 Kant: *Critique of Pure Reason*
 Goethe: *Faust*
 Hegel: *Science of Logic*
 Schopenhauer: *The World as Will and Idea*
 Coleridge: *Biographia Literaria*
 Bentham: *Principles of Morals and of Legislation*
 Malthus: *Essay on the Principles of Population*
 Mill: *System of Logic*
 Marx: *Capital*
 Balzac: *Père Goriot*
 Thackeray: *Henry Esmond*
 Dickens: *David Copperfield*
 Flaubert: *Madame Bovary*
 Dostoevski: *Crime and Punishment*
 Tolstoi: *War and Peace*
 Zola: *Experimental Novel*
 Ibsen: *The Doll's House*
 Dalton: *A New System of Chemical Philosophy*
 Clifford: *The Common Sense of the Exact Sciences*
 Fourier: *Mathematical Analysis of Heat*
 Faraday: *Experimental Researches into Electricity*
 Peacock: *Algebra*
 Lobachevski: *Theory of Parallels*
 Darwin: *Origin of Species*
 Mendel: *Papers*
 Bernard: *Introduction to Experimental Medicine*
 Galton: *Enquiries into the Human Mind and Its Faculties*
 Joule: *Scientific Papers*
 Maxwell: *Electricity and Magnetism*
 Gauss: *Mathematical Papers*
 Galois: *Mathematical Papers*
 Boole: *Laws of Thought*
 Hamilton: *Quaternions*
 Riemann: *The Hypotheses of Geometry*
 Cantor: *Transfinite Numbers*
 Virchow: *Cellular Pathology*
 Poincaré: *Science and Hypothesis*
 Hilbert: *Foundations of Geometry*
 James: *Principles of Psychology*
 Freud: *Papers on Hysteria*
 Russell: *Principles of Mathematics*
 Veblen and Young: *Projective Geometry*

Astronomical Photography at Haverford

HENRY V. GUMMERE, '88

Director of the Wm. J. Strawbridge Memorial Observatory

ASTRONOMICAL research today is carried on almost entirely by means of photography. There are two main reasons for this—first, a photograph is a permanent record, which may be studied and measured at any time and under the best possible conditions; second, a long exposure will record details too faint to be seen with the same instrument. For example, with the 100-inch telescope at Mt. Wilson stars can be photographed which are six times fainter than the faintest that can be seen with the same instrument.

Cameras of many types are used for a great variety of purposes in astronomy, but all these may be arranged in two main classes—those which take large scale photographs, as of the Sun, Moon, a planet, a nebula, and so bring out fine detail in these objects, and those which take small scale photographs of large areas, as of an extended region in the sky, which may be studied for certain types of objects in that region, usually for statistical purposes. It was with this type of camera that the new planet,

Pluto, was discovered in 1930.

In the spring of 1934 a camera of the second type was installed in the north dome of the new observatory at Haverford. The camera itself has a four-inch lens—really a combination of four lenses—especially designed for this purpose, is of twenty-eight inch focal length, and takes a plate ten by twelve inches. The field covered by this plate would just about include the entire constellation of Orion. Kits which may be inserted in the plate-holder make it possible to use several smaller sizes of plates. The camera box is rigidly attached to a guiding telescope of four inches aperture, the center of whose field coincides exactly with the center of the field of the camera. A pair of faintly illuminated wires cross at right angles exactly in the center of the field of the eyepiece; when the camera is in use, a star in the region to be photographed is brought to coincide with the intersection of the cross-wires, the telescope is clamped in position and an electric motor carries the telescope with the star as it rises and sets. Always the star

wanders from its position, for various reasons; the observer must therefore watch it all the time and keep bringing it back to center by the aid of slow motion attachments. The success of the picture depends on the accuracy with which this is done. Exposures of anywhere from one hour to six or eight are necessary to obtain the desired results. Exposures even longer than this may be necessary to obtain a record of a very faint object, or of an object whose radiation is not of the blue or green type to which ordinary photographic plates are most sensitive; red stars, for example, of which there are many.

Since red stars are just as important to the astronomer as any other kind, and since these long exposures made the process of recording and mapping them very slow and tedious, research workers long ago began to experiment with new types of emulsion which would be much more sensitive to red radiation than the ordinary plates. Success attended these efforts, and about three years ago an emulsion was produced which was not only far more sensitive to deep red rays but was even quite sensitive to radiation below the red, the so-called infra-red, or heat rays. With these plates pictures have been taken of objects "illuminated" only by the heat radiations from an electric iron, in a

room from which all visible light was rigidly excluded. The value of these plates for astronomical purposes being obvious, some were sent to the observatory at Mt. Wilson for testing; an enthusiastic report of the results of this test appeared in an astronomical periodical in the latter part of 1937. The report remarked that these plates seemed to open an entire new field in astronomical photography.

Inspired by this statement, some of these plates were obtained and experimented with at Haverford, with very encouraging results. We found that not only were good images of red stars obtained much more quickly with them, but that the sensitivity of even these plates could be greatly increased by soaking them, a short time before using, in a weak solution of ammonia. We had been advised of this by the manufacturers. This process seems to increase the sensitivity three or four times, thus reducing the necessary exposure time to one-third or one-fourth of that required for untreated plates.

In order that photographs taken with these "infra-red" plates may be useful in detecting red stars which would not appear on ordinary plates, it is necessary, first, that the infra-red plate should be protected by a "light filter," a gelatin film stained a deep red, so that no blue, green, or violet light may get through,

and, second, that a second picture, of the ordinary kind, should be taken of the same region. A comparison of the two pictures will then show whether any stars appear on the one that do not appear on the other. Moreover, the two exposures must be made under the same atmospheric conditions, as nearly as possible, in order that apparent differences may not be due to the weather. Since but one exposure can be made in a single night, because of the length of time required, changes in the weather are more than apt to compel the exposures to be taken several days apart, and under conditions which may not be nearly the same. Also a camera lens designed for ordinary, blue-green photography is not well suited for the infra-red, since the focal length would be different and, at the best, images would be slightly distorted. In order to obviate these difficulties, a second camera was obtained, an exact match for the first in size of lens and focal length, but differing from it in that the lens was especially figured for the deep red and infra-red rays. A cap for the lens contains the light filter. This camera is mounted on the same guiding telescope in such a way that its field of view is exactly the same as that of the first camera. By this means, when conditions are good, both the blue-green and the infra-red plates can be exposed at the same time and

thus insure precisely the same conditions. This new camera was finally installed in November, 1938; preliminary experiments to determine suitable exposure times, proper developing agents, etc., have been completed and we are ready to proceed. This process has been delayed by the kind of weather of which an astronomer's opinion is not fit to print, and there has been an unusually great amount of it.

What may be accomplished with this apparatus? Of course, the object is to locate red stars exactly, in order that they may be included in astronomical maps. It is barely possible, although the probability is slight, that a star (which gives off no visible light at all and so could not be *seen*, even with the new 200-inch telescope) might be picked up by the infra-red camera. No one knows at present where in the sky the happy hunting grounds of red stars may be, or even if there is any such region. The only thing possible is to make a general reconnaissance survey of all parts of the sky available at Haverford, taking each region as the progress of the year brings it into a favorable position, and hope for useful results. No one, apparently, has as yet begun a similar survey. This sort of work is especially suited to small apparatus such as ours; detailed study of interesting fields may then be undertaken with more powerful apparatus.

One interesting possibility of infra-red photography in astronomy remains to be mentioned. It is well-known that there exist in the heavens great clouds of cosmic dust or gas, especially in the Milky Way, which are some times lighted up by neighboring stars, so as to appear in the telescope as irregularly shaped masses, or streamers, of soft milky light, known as nebulae. There are also places where such a cloud obviously shuts out the view of whatever may be behind it. The name given to such clouds is "dark" nebulae; there are many regions in the Milky Way where dark patches intrude upon a field otherwise rich in stars. That such a cloud is the cause of this is shown by the fact that long exposure photographs show a very faint light in such dark places. These clouds of course are essentially very thinly populated with dust particles, or gas molecules, but their depth is so enormous that the obscuration is great. Now it is well known that, while clouds, or fog, are opaque to green or blue radiation, they are not so to red or infra-red; two pictures taken in quick succession from a mountain top in California, one with ordinary plates, the other with infra-red, show in the one case only a foreground, with a wall of fog above it, in the other a detailed picture of a distant city. Stars, therefore, giving off infra-red radiation and situated behind

a nebula should record themselves on our plates. Photographing behind the veil is an alluring idea!

An exposure time of four hours has been adopted as a standard. It is of course difficult, well nigh impossible, for one observer to sit for such a length of time continuously watching a star and correcting its wanderings, especially on a cold night, and expect to do his work as accurately at the end as at the beginning. It is essential that there should be two observers, alternating at, say, half hour intervals. In this respect the assistance of Newman S. Shirk, of the Class of 1930, has been and continues to be invaluable. His expert knowledge of photography and his enthusiastic devotion to this work are rendering possible a program which would otherwise be very difficult to carry through. Perhaps another year will enable us to report some tangible results.

Editor's Note: It is interesting to record that Astronomy has always held an important place in the curriculum of Haverford College, and that Haverford has the second oldest collegiate observatory in America, Yale alone antedating it.

In the year following Haverford's opening in 1833 there came John Gummere as Superintendent (President) and Teacher of Science, who set up his few in-

struments in a small building, the site of which is marked by the sun-dial near the Library, and there gave instruction in Astronomy. It is a happy coincidence that the Director of the present observatory, Henry V. Gummere, '88, is a direct descendant of this first teacher of Astronomy.

This first small building was enlarged and rebuilt in 1852, when there was installed one of the first telescopes to be built in America, the product of that great workman, Fitz, of New York. This telescope is now loaned to the Franklin Institute in Philadelphia as an example of early American scientific apparatus.

During the years that followed, Astronomy had the support of two more of Haverford's Presidents, Joseph G. Harlan and Isaac Sharpless. Mention, too, should be made of certain members of the Faculty, Professor Francis P. Leavenworth, late

Director of the Observatory at the University of Minnesota, and Professor Ernest W. Brown, late of Yale University and at one time closely associated with Sir Robert Ball, Astronomer Royal of Ireland.

In 1883, primarily due to the efforts of Isaac Sharpless, the Observatory was again rebuilt and enlarged, and new equipment including a 12-inch Refractor with micrometer spectroscope was purchased and installed in time for the Semi-centennial.

Financial support from the Hinchman family put Astronomy on a secure basis. The most recent step in the history of this Department was the third rebuilding of the Observatory in 1933 as part of the Centenary Celebration. This improvement was the gift of the Strawbridge family as a memorial to their brother, William J. Strawbridge, of the Class of 1894.

Obituaries

1878

Edward Forsythe died in Philadelphia on January 26th in the eighty-third year of his life, following a long period of ill health. He suffered a paralytic stroke in 1936.

Born in Pennsybury Township, Pa., July 7, 1856, he was a descendant of John Forsythe, first Principal of the Westtown School, which he later attended, before entering Haverford College in the Senior Class in 1877. He received the S. B. degree upon graduation in 1878.

Upon graduation, Mr. Forsythe was Principal of the Moorestown Friends' School for two years and then Principal of a successful school in Morris, Ill., where he remained until 1886, resigning to enter upon a lifelong career in the Investment Brokerage field. More recently he had formed, with a brother Francis, the firm of Edward and Francis H. Forsythe with offices in Philadelphia.

While teaching at Moorestown, he met and married Hannah J. Yerkes who predeceased him by several years, but he is survived by his brother Francis, and two children, Mrs. Grace Carr of Honolulu and F. Hamlin Garland Forsythe of Lansdowne. Mr.

Forsythe, while at Morris, Ill., met Hamlin Garland and formed a lifelong intimacy with the author.

1881

William Henry Collins died at his home on College Avenue on Saturday, March 11th.

Few Haverfordians have spent more years of their lives on the Campus or in the service of the College than Mr. Collins, who graduated in 1881 with the S. B. degree (he was awarded an A. M. in 1892) and who, after a few years in mercantile pursuits, returned in 1891 as Assistant in Astronomy. From 1892 until 1904 he was Director of the Observatory, and from 1897 until his retirement in 1920 he served as Superintendent of Buildings and Grounds.

Mr. Collins was Spoon Man of his Class and from 1881 has been Class Secretary. When a Chapter of Phi Beta Kappa was established at Haverford in 1898, he was one of the first to be enrolled. As Director of the Observatory, Mr. Collins proved himself a writer on Astronomical subjects of considerable distinction. He was a lifelong member of the Society of Friends and a constant attendant at Haverford Meeting.

William Henry Collins was born in Peekskill, N. Y., on October 22, 1859, and in 1894 married Julia Cope, daughter of Dr. Edward Drinker Cope, one-time Professor and Lecturer at Haverford and a world famous Paleontologist. Mrs. Collins survives him.

1881

J. Horace Cook, S. B., 1881, died after a long period of ill health on March 25th in the 77th year of his life. He was a resident in recent years of Bala-Cynwyd.

Graduating as an engineer, Mr. Cook spent three years with the Pennsylvania Railroad, and then in 1884 became associated with the Board of Education in Philadelphia, having charge of all buildings until his retirement in 1918.

His first wife having died in 1911, Mr. Cook married Miss Mary M. Fuller in 1918 and removed to Altadena, California, where he resided until 1937, when he returned East and has since been living at the Sevilla Apartments in Bala-Cynwyd. He was a member of the Union League in Philadelphia.

1885

Thomas Newlin, S. B., 1885, A. M., 1892, who died at his home in Pasadena, California, on Jan-

uary 25th, presented, we believe, the very unique and only instance of a Haverfordian holding a full Professorship before receiving his undergraduate degree.

Although he was honored by the LL. D. and B. D. degrees from Southern California and Whittier, respectively, in later years, he was without a degree when he came to Haverford in 1884 as Professor of Zoology and Botany and in Charge of Discipline, a position held for two years. In 1885 he submitted himself to special examinations by the Faculty with the result that he was granted the degree of Bachelor of Science as of the Class of 1885.

President of three Quaker colleges, Pacific, Whittier and Guilford, almost his whole life was devoted to teaching and college administration and even his Y. M. C. A. work during the World War was but an interlude, for he immediately returned to academic pursuits as Head of the Department of Philosophy at Fullerton Junior College in 1919.

In 1884 he married Olive Wilson at Spiceland, Ind., by whom he is survived.

1887

Henry Warrington Stokes died of a heart attack on November 30th at his home, "Windy Hill," near Media.

Son of a Haverfordian, Francis Stokes, '52, and Katherine Wistar Evans, he entered Haverford in 1883 from the Germantown Friends' School and graduated with the A. B. degree four years later.

During his undergraduate career, Henry Stokes was a member of his class Cricket Team, the Second Eleven, and the First Eleven, being a steady batsman, although not a large scorer.

In 1889 he was elected Treasurer of the York Haven Paper Company, becoming President in 1909 and serving in that capacity until his retirement in 1929. In 1924-25 he was President of The American Pulp & Paper Association.

Elected a member of the Board of Managers in 1926 (his father served as a Manager from 1885 to 1917) he was immediately named Chairman of the Committee on Farm and Property, and for the past twelve years has been closely identified with Haverford College. He was eminently fitted for this work through his principal hobby, "farming." He was an active member of the Centenary Committee and more recently served as Chairman of the Centenary Fund Committee. He was a generous contributor to the original Centenary Fund, and for him and other members of the Stokes family, one of the entries of Lloyd Hall has been designated "Stokes."

Mr. Stokes was a Director of the Provident Mutual Life Insurance Company, President of the Sleighton Farm School, President of the Rush Hospital, Trustee of the Dunwoody Home, and a member of many clubs. In fact, there was no field of action—business, finance, charity or social that did not feel the impress of his personality.

In 1905, Mr. Stokes married the late Helen B. Tyson, who predeceased him in 1933. He is survived by a son, J. Tyson Stokes, '28.

1889

Death came on January 26th to Arthur Newlin Leeds, A. B., 1889, M. A., 1890, closing the career of one of Haverford's most gifted sons.

Born in Philadelphia and prepared at Westtown School, he entered the Junior Class in 1887, coming under the tutelage of two teachers who had the most profound influence upon his later life, Dr. J. Rendel Harris in Biblical Literature and Dr. J. Playfair McMurrich in Biology.

After ten years with the Millville Manufacturing Company, he went into business for himself, acquiring a dominating interest in the Wabash Mills Company, of which he was President until his retirement in 1926.

In 1928 he associated himself with the Academy of Natural Sciences and as Research Associate and Fellow he became an

authority in the field of Pteridophytes (ferns and fern allies), only his illness of the past two years preventing many valuable papers from his pen.

With his brother Morris E. Leeds, '88, he was a founding member of the Philadelphia Botanical Club in 1891, serving as Treasurer from 1893 until his death. He was also President of the Friends' Historical Society, 1917-1919, and a member of the University, City, Germantown and Philadelphia Cricket Clubs.

Elected as Overseer of the William Penn Charter School in 1915, he was an active member of the Building Committee and took keen interest in the landscaping and planting of the new school in Germantown. He was also an active member of several committees of the Westtown Alumni Association.

In recognition of his scholarly attainments he was elected a member of the Phi Beta Kappa Society by the Haverford Chapter in 1933.

His religious life centered in Germantown Meeting where he was a regular attender and Chairman of the Nominating Committee of that Meeting as well as of the Yearly Meeting.

Arthur Newlin Leeds had a genius for friendship that will make him sorely missed by all who knew him, especially by those members of the Class of 1889 when they celebrate their 50th anniversary in June.

1889

Joseph Henry Painter died at his home in Dayton, Ohio, on Friday, March 3, 1939.

Mr. Painter, a graduate of Wilmington College, entered the Senior Class in 1888, graduating with the S. B. degree the following year. In 1903 Wilmington College conferred the A. M. degree for distinguished scholarship in German.

Almost all of his life was spent in the field of secondary education, having taught at Kennett Square, Pa., Wilmington and Dayton, Ohio. On his retirement in 1932 he was Principal of the Steele High School in the latter city.

Mr. Painter was born in Wilmington, Ohio, August 1st, and in 1889 married Elva Hinshaw by whom he is survived. Of their three children, the two sons, Donald Hinshaw and Herbert J., are graduates of Haverford in the Classes of 1917 and 1918, respectively.

1890

Charles Herbert Thurber, a Master of Arts in the Class of 1890, died at the Phillips House of the Massachusetts General Hospital in Boston on December 9th, following an illness of several weeks. He is survived by his widow and one married daughter.

Dr. Thurber, a graduate of Cornell in 1886 served that institution as Registrar and Secretary from 1886 to 1888, then studied abroad for two years be-

fore coming to Haverford for graduate work. Returning, he taught successively at Cornell, Colgate and the University of Chicago. He received his Ph. D. at Clark University in 1900 and in the same year entered the employ of Ginn & Company in an editorial capacity. In 1904 he was made a partner continuing as such until his death. He retired from active work in 1933.

He was a member of the Board of Syndics at Harvard University Press, President of the Board of Trustees of Clark University, a member of many scholarly organizations including Phi Beta Kappa.

Born in Owego, N. Y., March 24, 1864, he was in his seventy-fifth year.

1914

Edward Rice, Jr., succumbed to a heart attack on February 8th, while recuperating at No Name Island, Fla., near Key West.

He was a native of Cape May Court House, and entered Haverford from the Swarthmore High School, as a Corporation Scholar,

a rank which he maintained for the entire four years, and was elected to Phi Beta Kappa in the Senior Year. He received the A. B. degree.

His undergraduate activities included Class Soccer and Cricket Teams, the College Cricket Team with membership in both the Canadian and English tours. He was Manager of Football in 1913, President of the College Association in 1914 and a member of the Triangle Society.

Engaging in the shipbuilding and steamship business, following war service with the British Red Cross and the U. S. Navy, he founded the agency of Rice, Unrih & Company, continuing therewith until 1929, when he retired to devote himself to his many inventions, among which was a "listening device" which he had developed in company with other engineers to locate submarines. This has been adopted by the U. S. Navy.

In recent years he has been a resident of New York City, where he is survived by his widow and five children.



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The Trees of Haverford College Campus

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THE Haverford College *Bulletin* states that, "The College has a pleasant and beautiful location in the township of Haverford, Delaware County, Pennsylvania, nine miles west of the center of Philadelphia." The first Managers in describing the selection of the site wrote: "We wish to procure a farm in a neighborhood of unquestionable salubrity . . . recommended by the beauty of the scenery and a retired situation." The same bulletin also states that the present property consists of two hundred sixteen acres—the map accompanying the bulletin gives two hundred twenty-six as the acreage—described as follows: "While a portion is retained as farm and woodland, a lawn of sixty acres was long ago graded and tastefully planted with trees and shrubs by a landscape gardener, so that the natural beauty of the location has increased with passing years." The phrases "salubrity of the neighborhood, the beauty of the scenery, and the retired situation" of the two hundred sixteen acres, together with the increase of the natural beauty of the location brought about by landscaping, paint a picture of horticultural

and sylvan richness false in no detail, but particularly true in regard to our wealth of trees, wealth both in number of kinds and perfection and interest of individuals.

The woodland "retained" consists of four plots, one small, north of the skating pond, another slightly larger between Lloyd Hall and College Avenue, a small grove of locusts and mixed growth by the power house, and the largest one of the four along the south and east boundaries of the College grounds, which is traversed by the Nature Walk. Strangely enough, although blessed with these four acres of natural woodland, few trees of authentic age equal to that of the College are present. Two large tulip trees, one on either side of the Nature Walk as it leaves the southern border of the last mentioned woodlot, are the only trees of the original purchase to survive the first hundred years of college life. The others have gone to feed the flames of the College fireplaces. Despite this lack of living specimens with an authentic age equal to or greater than the College, several records of an older forest are still available. These are contained in the stumps of

American Chestnuts, dead since 1916, when they were killed by a Chestnut Blight, introduced from the Orient. A few of the stumps bear evidence in their rings of at least a hundred years of life and how much more cannot be determined, as the central rings have completely decayed.

The only other tree of an age equal to that of the tulip trees and the long dead American Chestnuts is the Osage-orange, sprawling fantastically on the ground near the south entrance to the Mary Newlin Smith Memorial Garden. This tree, certainly not a part of the original forest, as Osage-orange is not native, but an introduction from the Mississippi Valley, is supposed to have been planted before the original purchase. It is, nevertheless, one of the oldest Osage-oranges to be found, and tradition has it that the children of all the generations of the Haverford College faculty have played in its sprawling branches. The children may have played in it, but a count of its rings shows considerably less than one hundred years of growth. However the difficulty of counting the partly decayed and much contorted rings of the oldest part of the trunk is too great to permit an accurate determination of its age, and it may well be as old as is claimed. At least it is one of the oldest and certainly one of the most picturesque trees of the campus.

A comparative youngster to the ancient Osage-orange is a scion, once removed, of the Penn Treaty Elm. This, one of the best known trees of the campus, displays the typical urn-like form of the elms directly between Founders and Sharpless Halls. The tree is actually a living part of the ancient elm under which William Penn met the Indian chiefs in 1682. Botanists regard propagation by scions as a distinctively vegetative process, as contrasted with sexual reproduction by seed, and plants so produced are to be considered a continuation of the original, separated in space and time. The original tree was of majestic proportions, having a girth at the base of twenty-four feet, and a branch spread of one hundred fifty feet, and many an Indian council was said to have been held beneath its wide spreading branches. The old elm finally came into the possession of General Paul Oliver, who transplanted a shoot from the dying tree to his home in Bay Ridge, New York. There it grew for about fifty years. Then General Oliver moved to Wilkes-Barre, Pennsylvania, and so great was his sentimental attachment for the tree that he had it transplanted to his new home. The tree survived the dangers of moving and may still be seen near the town chapel at Wilkes-Barre. A scion from the General Oliver tree was presented to Haverford

College by Joshua Baily, at one time head of the J. L. Baily Cloth Manufacturing Company. This tree, our elm, has now a circumference of over ten feet, a height of ninety feet and a branch spread of one hundred twenty feet, not yet as large as the original tree but with an excellent chance of reaching and even surpassing it within the next one hundred and fifty years.

Other, but smaller, trees developed from scions taken from the General Oliver tree may be found in the vicinity of Haverford College. The best known of these include one on the campus of the University of Pennsylvania, planted by Governor Hastings, one on the grounds of the Pennsylvania Hospital in Philadelphia, another in the yard of the Friends' Meeting House on 12th Street in Philadelphia, and still another on the campus of Westtown School.

About two hundred fifty feet southeast of Roberts Hall a group of seven young elms may be seen. These are rooted from scions taken from our elm by Mr. C. C. Wistar, an alumnus of the College, and presented to the College by him in 1916. In giving seven trees for planting, the old English custom of planting seven trees of the same species in a group was followed. This same custom also accounts for the other groups of seven to be found on the campus.

Some of the older groups of seven may be seen in the same

section of the campus as the young scions of the Penn Treaty Elm. About midway between them and the College pond is a group of seven large tulip trees, none equaling the size or age of the two on the Nature Walk, but magnificent specimens nevertheless, especially in autumn, when their bright yellow foliage and rugged contours make a pleasing picture against the blue of the distant pond. Directly across the campus and about two hundred feet northwest of Roberts Hall is another interesting group of seven. In this American Elms and English Elms have been planted together, a slight departure from the custom but a sightly one nevertheless. The group well illustrates the differences in general appearance between the two species. Viewed from the group of tulip trees previously described, the rugged English Elms pile up their masses of foliage on the left of the group, while the American Elms show their drooping, more graceful outlines on the right. Another interesting difference is in their leaf fall. Long after the American Elms are bare the English Elms still retain their masses of foliage. Two other groups of seven are to be seen in the same section of the campus, one of White Oaks and Scarlet Oaks at the edge of the little copse by Professor Snyder's house just to the left of the spot where the walk from Roberts Hall to

Merion enters it; another of Swamp White Oaks occurs on the brow of the hill between the tulip trees and the pond. Other individuals and groups are present and worthy of mention but it is well to remember that the trees of Haverford College, although an important element of the "tastefully planted" lawn and campus, are now also part of the Haverford College Arboretum.

An Arboretum, as generally defined, may have three more or less distinct functions; first, as an out-of-door museum in which the public can see hardy trees and shrubs, both native and introduced, conveniently arranged; second, as a dendrological station and laboratory in which the scientific study of trees is carried on; and third, as a bureau of publication, exploration and exchange through which botanical exploration in different parts of the world is undertaken and the results and products of these explorations made known and distributed. The first and second of these functions are the only ones likely to be attempted at the Haverford College Arboretum, and thus far the emphasis has been almost entirely on the first.

The origin of our Arboretum, or rather the origin of the thought of an Arboretum, is somewhat obscure. Apparently the failure of the farm land to produce an annual profit led to some discussion of other uses for the land.

This, combined with a real love of trees, led a number of minds to the thought of the development of an Arboretum. The thought took definite form in 1926 when Mr. R. J. Johnston presented a tentative plan for a College Arboretum. In collaboration with Mr. Henry W. Stokes, Mr. Edward Woolman, President Comfort, Professor Albert Wilson, and other members of the Campus Club, and with the technical advice of Mr. Albert L. Baily, plans were made, and in 1928 several hundred small trees were purchased and planted in a temporary nursery on the part of the College grounds to the west of Haverford Road. Additional trees have been purchased in succeeding years and those first purchased have been transplanted to the Nature Walk or the permanent Arboretum as they reached the proper size. Although all trees on the campus are rightfully considered elements of the Arboretum, the plantings made since 1928 on the farm lands along the south and west boundaries of the College grounds have been arranged to show generic and family relationships and thus technically fulfill the definition of an Arboretum better than the indiscriminate mixture of species about the College buildings. Due, however, to the number of kinds and the beauty of individual specimens of the oaks of the older plantings, no effort has been made to dupli-

cate them in the newer part of the Arboretum, and any additional species available will be planted in what is now regarded as the oak section of the Arboretum, the section immediately surrounding the College buildings.

Surplus trees of the original purchases have been planted out to form the borders of a path extending from the Observatory west to Haverford Road, then south to the southwest corner of the grounds, and then east to the large tulip trees at the entrance to the woods. The path continues through the natural growth of the original woodlot to its north boundary then north and east through an avenue of Scot's Pine to the roadway by Professor Lockwood's house.

The Scot's Pine and the flowering shrubs of the east section of the Nature Walk were given by Mr. Edward Woolman. Mr. Francis J. Stokes has generously contributed a fund, the interest from which helps to support the growing needs of the Arboretum.

At present the Arboretum has two hundred forty-two species of trees either as nursery stock or actually in the Arboretum. Of these, eighty-nine are conifers and the pinetum. The first section of the Nature Walk beyond the Observatory contains young and vigorous specimens from many parts of the world and is well worth a visit by anyone at any time. It is especially attractive

during the winter when snow transforms the whole planting into a green and white fairyland of strangely shaped Christmas trees. The casual visitor may or may not notice that pines with two needles in a cluster are first in the planting, followed by those with three, two and three mixed on the same tree and last those with five needles. In the first group, just to the left of the walk as it drops over the brow of the hill, appears the low, bushy Mugho Pine, often used in foundation planting. The other common name, Swiss Mountain Pine, furnishes a clue to its native habitat, which is the mountainous region from Spain to the Balkans. A large and exceptionally fine tree of this species may be seen about fifty feet northeast of South Barclay. To the left of the Mugho Pine group, along the crest of the slope, other two-needle pines are in sequence, Scot's Pine, Jack Pine and last the Table Mountain Pine. This is a pine found only near the top of the Appalachian Mountains from Pennsylvania to Georgia. Its cones are remarkable both because of their long, sharp, recurved prickles and their firmness of attachment to the trunk. They often remain and are covered over by the growing bark and wood of the tree. The Japanese Red Pines, easily recognized by their groups of three needles and luxuriance of cone production, are planted a little farther

along the Nature Walk. With them are the Pitch Pines of New Jersey, also three needles, but with thicker prickly cones. Nine other species of Pine occur in this first section of the pinetum, but each cannot be separately described. Following the pines, about midway between College Avenue and Featherbed Lane is a group of junipers and *Retinosporas*. These vary in habit from the tall columnar form of the Chinese Juniper to the low spreading, prostrate forms of the Common Juniper.

Beyond the junipers, there follows in order, the yews, the Giant Sequoia, the larches, the true cedars, including specimens of the Cedar of Lebanon, the Atlas Cedar and the Deodar Cedar. Along the upper margin of the field, just below the practice field and the tennis courts, are the plantings of the firs, hemlocks and spruces in order. Ten species of firs, four of hemlock and nine of spruce have been transplanted from the nursery.

The deciduous trees occupy the former cornfield to the south of Featherbed Lane and are arranged as are the conifers in a sequence to illustrate degree of relationship. With few exceptions the groups adjacent to each other are those most closely related. Included in this section are many interesting trees, but as larger, more easily located specimens of many of them occur

about the College buildings it might be better to select from that section a few of the most interesting.

The main campus being the oak section of the Arboretum, many species of that genus may be expected there. Thus in the space between Lloyd, Roberts Hall and Sharpless Hall, are specimens of Northern Red Oaks, pin oaks (a large tree at the entrance of Sharpless Hall), turkey oaks (the only campus specimen is to be found between Roberts Hall and North Barclay), Burr Oaks or Mossy Cup Oaks (the two names are used about equally), and Swamp White Oaks. The Burr Oak standing by the walk between Roberts Hall and Founders is the most massive tree of the campus, although another almost as large is located near the east entrance to the Mary Newlin Smith Memorial Garden. In the rear of Sharpless Hall are three young specimens of the Cow Oak planted in honor of Chalkley Palmer and a Spanish Oak planted by the class of 1940. North of Barclay are two Overcup Oaks and to the east along College Lane, a Scarlet Oak. Between the planetrees, along the margin of Merion Field, are a number of English Oaks. Interesting to most who have seen only the lobed-leaved oak of the northeast is the entire-leaved Willow Oak. A magnificent specimen shades the tennis courts by the Chemis-

try Laboratory. The planting along Featherbed Lane is also composed of this species. Two specimens of another entire-leaved oak, the Basket Oak, are to be found along the roadway between Lloyd Hall and Railroad Avenue, one to the east of the road and the other almost in the center of the triangular plot formed by the road, Railroad Avenue and Meetinghouse Lane.

In the small area of the triangle many other interesting species are to be seen. A Soapberry, native to the Southwest, grows to the right of Meetinghouse Lane. The blue berries of this tree are saponaceous and have been used as a soap, hence its common name. Near it stands a small elm with golden-yellow foliage, the Golden Elm.

Nearer the road and directly opposite the Basket Oak is a *Cedrela*, a tree with compound leaves and stringy bark. It is also known as Cigarbox-cedar from its use in the making of cigar boxes. Near it is a tree with large heart-shaped leaves and numerous seed pods, displayed during both summer and winter. In the early spring this tree, the Empress Tree or *Paulownia*, is often covered with pale lavender colored flowers which open before the leaves develop. Its habit of early flowering and of forming the flower buds in the late summer and carrying them on exposed branches throughout the winter is respon-

sible for the loss by freezing of the flowers except during the most favorable seasons.

Directly in front of Center Barclay and exposed to the flames of student celebrations is a Bald Cypress. This, a tree of the southern swamps, develops knees, or breathing roots, when growing in water but lacks them when grown in dry soil. Small Bald Cypressess have been planted along the margin of the pond, and in time a fringe of "knees" should appear. This conifer also has the habit, unusual for conifers, of dropping its needles during the winter season. With the needles it drops the small branchlets bearing them, a habit unusual for any tree.

Near the Bald Cypress and enclosed in the triangle formed by the roads is a single tree. This is the *Katsura*, a tree of Japan, which starts life as a small bushy plant with numerous upright stems. These coalesce as it grows older to form a single braided trunk. An older specimen immediately south of Morris Infirmary shows the coalescence much better than the one by Barclay.

Another tree with fluted trunk somewhat similar to the *Katsura* is the *Styrax*. One specimen of this beautiful tree may be seen in the opening behind the gymnasium. Its fluted and buttressed trunk and horizontal branches compressed to a plank-like thinness gives this tree of the south-

west a truly tropical appearance. In late May the spreading branches bear a profusion of tiny flowers, outlining the tree with horizontal bars of white. Near it is a small Epaulette-tree, so called because the masses of small flowers bear a resemblance to the shoulder ornament of that name.

Many more kinds of trees are present and many of them are as interesting as those mentioned, but not all can be given space here. However two more have to be included in any mention of Haverford College trees. First the Ginkgo, known to every student who has occasion to travel the road to Meeting or pass in front of Founders Hall. The rancid smelling fruits are produced only by female trees which usually have more widely spreading branches than the males. Unfortunately the sex of the young trees could not be determined at the time the Haverford specimens were planted. However, if the outer pulp is washed away, the inner meat is without odor and is not unpalatable when roasted. The tree is of great interest to botanists as it is one of the oldest trees in existence (it is often described as a living fossil), and is unknown in the wild state. The specimens introduced into this country were obtained from the

Orient where the Ginkgo had long been grown as a temple tree.

Another famous tree is the Gordonia or Franklin-tree. This is a small tree or large shrub with gardenia-like flowers produced throughout the summer and fall. It was discovered by John Bartram in Georgia. Specimens were sent by him to England, and it became a favorite garden shrub. The number of specimens sent to England either exhausted the supply of wild plants or the original site has been lost, as no botanist has been able to find a wild plant in the past hundred years. This despite the fact that repeated searches of Georgia swamps have been made by experienced botanists during that time. A small specimen of this tree is on the left of the Nature Walk just within the entrance by Professor Lockwood's house. Another, which has borne flowers for the past few years, may be seen by the Nature Walk, about two hundred feet from the large tulip trees at the edge of the woodlot.

These and the many other trees not mentioned help to preserve "the beauty of the scenery," observed by the first Managers and will certainly continue to increase the natural beauty of the location with passing years.

SPRING

Clouds and white sunlight,
White birds in the sky,
And the white wave falling
Where the warm sands lie.

Rain and grey breakers,
No gulls in the gloom,
And the grey flood crashing
Where the cold rocks loom.

TRISTRAM P. COFFIN, '43.

Premedical Work at Haverford

WILLIAM BUELL MELDRUM

John Farnum Professor of Chemistry, Haverford College

IT IS a matter of record that Haverford has been favorably regarded for many years as a preparatory college for medical school. Year after year young men have issued from the Main Line campus in a fairly steady and slowly growing stream, to continue elsewhere their preparation for a career in medicine or surgery or medical research. The success of these men in their medical school courses and in subsequent practice, coupled with an expanding recognition of Haverford's high standards of scholarship, has induced a definite trend towards the College of men seeking an adequate premedical education in a scholarly environment. A factor which has recommended Haverford over many other colleges is the flexibility of the College program. This permits a man to develop his major scholastic interests in whatever field they may lie and at the same time secure a knowledge of those subjects essential for admission to medical school. This plan possesses undoubted advantages over that obtaining in many institutions where a student preparing for medical school must follow a rather rigid program of courses

with few electives and with an undesirable preponderance of science. In spite of the extensive preparation in scientific subjects now expected of students seeking admission to medical school, the Haverford student has abundant opportunity to follow his interests in the non-science fields.

The recent changes in status and in content of the premedical course is directly ascribable to the change in the requirements for admission to medical school. During the past forty years, as everyone today realizes, medical knowledge has increased in a truly remarkable way. This increase necessitated an expansion of the medical school curriculum. New courses and whole new fields of study had to be incorporated if graduates of the medical schools were to receive the benefit of new knowledge and new techniques. The expansion took place in two directions. Postgraduate courses in special techniques were established, and to a large extent the premedical sciences were shifted back into the preparatory college course. In 1900 and even later, a high school course was sufficient pre-requisite for admission to medical school. Today, at least

two years of college work is required for admission to any medical school; some schools, including Jefferson Medical College, in Philadelphia, definitely require a full four-year college course; the majority although not requiring, according to their published statements, graduation from college, admit very few who do not comply with that requirement. Today, all medical schools, following the rulings of the American Medical Association, list certain college courses in biology, chemistry, physics, English, and a foreign language, as definite requirements for admission.

Still another factor, in addition to the expansion in medical knowledge and the consequent raising of admission requirements, tended to focus more serious attention on the college premedical course. This was the somewhat abrupt change in the ratio of those who wished to study medicine to the number of places which the medical schools could offer to them. This was all the more marked because as the former number grew the latter number diminished. Between 1890 and 1930 the population of the United States increased by about 95 per cent. Compared with this, the increase in the number of those availing themselves of high school and college education was very great. The increase in the number of secondary school students between 1890 and 1930 was 1,520 per cent, and the increase in the

number of college graduates was about 770 per cent. But, in contrast, the number of medical schools *decreased*, between 1900 and 1932, from 160 to 76, or 52.5 per cent, and the number of students in the medical schools *decreased*, during the same interval from 25,204 to 22,135, or about 12 per cent. Thus, today, to supply a nearly doubled population, and to satisfy the demands for medical training of a vastly greater number of men, the medical schools actually have *fewer* places to offer. This situation presented to the deans of the medical schools a serious problem and a splendid opportunity, the problem of meeting the demands of the many and the opportunity of selecting relatively few of the best. In Table I are given data, taken from *Medical Education*, published by the Association of American Medical Colleges, 1932, which show the change in number of medical schools, medical students, and the number of medical students possessing collegiate degrees, at various periods between 1890 and 1932.

The growth in the number of those applying for admission to medical schools is readily understandable from the figures quoted. As the population increased the number of secondary schools and of colleges not only kept abreast but advanced in much greater proportion, as was necessary to meet the demands of those who

TABLE I

YEAR	NUMBER COLLEGES	STUDENTS	GRADUATES	A.B. OR B.S.
1880.....	100	11,826	3,241
1890.....	133	15,404	4,454
1900.....	169	25,171	5,214
1910.....	131	21,526	4,440	689
1915.....	96	14,891	3,536	858
1920.....	85	13,798	3,047	1,321
1925.....	80	18,200	3,974	2,413
1930.....	76	21,597	4,565	3,211
1931.....	76	21,982	4,735	3,106
1932.....	76	22,135	4,936	3,525

were education-conscious. But unlike the schools and colleges, the number of medical schools declined sharply between 1906 and 1915. The Council on Medical Education, created in 1904 by the American Medical Association, formulated a minimum standard of medical education in the following year. This was followed by an inspection of all the medical schools in the United States and a classification on the basis of that inspection. Further attention was called to medical education conditions by the report by the Carnegie Foundation for the Advancement of Teaching in 1910. The standards for Class A rating were so high compared to what some of the schools were actually observing that these two studies were influential in effecting the practical elimination of proprietary and purely commercial medical schools. The educational requirements formulated by the

better medical schools on the basis of these studies were promptly embodied in state laws covering licensure to practice medicine.

When one realizes that the number of would-be-doctors has vastly increased during the past few decades whilst the opportunities for their admission to medical school have so greatly decreased, he can understand that the picture of 2,600 applicants at one medical school for 150 places is probably not overdrawn. It is apparent, too, that the admission officers of the medical schools have a fine opportunity to select from so many a relatively small group of the best. Admission officers have recognized their opportunity and have been exercising very careful selection of each freshman class. They consider not only the courses a man has taken and his showing in those courses but also the personal

qualifications of the man himself, his ethical standards, and his fitness for a medical career. As a result the medical students of today are probably a finer body of young men, on the average, than those of forty years ago.

The meeting of the admission requirements of any given medical school necessitates careful perusal of the individual requirements of that school. For, in addition to the basic requirements set down by the American Medical Association, there are usually special requirements of the school itself. For example, the University of Pennsylvania requires two courses, instead of one, in college English, and also courses in qualitative and quantitative analysis. Johns Hopkins University requires both French and German, advanced Organic Chemistry, and elementary Latin. Harvard requires advanced organic chemistry. The University of Michigan requires a second course in English composition. Out of 22 medical schools whose requirements were examined six schools require comparative anatomy, one requires physiology, two embryology, one physical chemistry, four English literature, one philosophy, one trigonometry, one political science, two European history, two psychology, and one sociology. In addition, various other courses are advised. Those most generally in this category are: comparative anatomy embry-

ology, genetics, physical chemistry, analytical chemistry, economics, English literature, Latin, mathematics, psychology, and sociology.

At Haverford, the specified and advised requirements of any medical school can be adequately satisfied. In general, a reasonable amount of science in excess over the minimum requirement is advised. No attempt is made, however, to "beat the gun" by teaching subjects which are included in the medical curriculum itself. For example, a course in physiological chemistry in college would greatly facilitate the parallel course in first year medical school. But this advantage is only temporary and contributes nothing to a man's ultimate ability in his medical school career as a whole. Furthermore, it prevents his taking in college some other, less technical, course that would be possibly of greater ultimate benefit. For the same basic reason, those at Haverford who act as advisers to premedical students do not advise and do not favor too heavy specialization in science.

Because of an unfortunate notion entertained by many who have not studied the situation, it might be of interest to reproduce, *in toto*, some representative programs of premedical students. The three selected, whom we shall designate as A, B, and C, respectively, were in the same class in College; one went to Harvard, one

to Pennsylvania, and the third to Johns Hopkins; all have done excellent work. As the programs may indicate, all three were chemistry Majors.

An examination of these programs will show that although the science requirements for admission to medical school have been met there is no undue preponderance of science courses in spite of the fact that all three were chemistry Majors. Of the twenty courses required for graduation, in no case were more than eight courses in science included. It seems to the writer that the distribution of the humanities in these four-year programs is so liberal that no one could intelli-

gently object to them on the basis of over-emphasis on science.

It would, of course, be puerile to suggest that the fair showing of Haverford men in their medical school careers is *due* to the inclusion of so many non-science courses in their premedical programs. On the contrary, their medical school grades would doubtless be improved by a greater emphasis on science in their premedical years. Such a liberal program, however, not only fulfils better the Haverford aim of giving all of its graduates a well-rounded education but also it is in accord with the expressed aim of the admission officers of the medical schools to select for

TABLE II

	A (HARVARD)	B (PENNSYLVANIA)	C (JOHNS HOPKINS)
1st year.....	English Mathematics French German Chemistry	English Mathematics French German Chemistry	English Mathematics French German Chemistry
2nd year.....	Mathematics Chemistry Physics German Economics	English Chemistry Biology German Economics	English Chemistry Biology German Economics
3rd year.....	Org. Chem. German Physics Philosophy Biology	Org. Chem. German Physics Art French	Org. Chem. Psychology Physics Art French
4th year.....	Chem. Research Org. Chem. Phys. Chem. Biology History Bib. Lit.	Chem. Research Org. Chem. Philosophy Biology Mathematics German	Chem. Research Org. Chem. Philosophy Biology Music Psychology

the future doctors of the nation men who are *educated* and not merely trained in the necessary techniques. It is also in accord with the theory that men of broad general education, with an appreciation of the cultural arts, are more likely to be of service to their fellow men than those with narrower training.

Faculty members in the college who have most to do with pre-medical education rarely attempt to guide men in their selection of a medical school. The undergraduates do their own choosing to a large extent. Occasionally, however, the number of prospective applicants to a given school in any one year seems disproportionately large, and some directing influence must be brought to bear, by way of suggestion, in order to effect a safer distribution. Medical schools, in general, have been generous in their selection of Haverford men, but it stands to reason that at any school there must be a limit in the number beyond which that school is unlikely to go. Haverford men have gone to many different medical schools, in greatest number to Pennsylvania, Harvard, Johns Hopkins, Jefferson, Hahnemann, and Cornell, but also to Columbia (C. P. & S.), Duke, Temple, Louisville, Virginia, Tulane, Rush, Kansas, Wisconsin, Washington (St. Louis), Yale, and George Washington. It is well known that premedical students

ordinarily make application at several different medical schools in order to enlarge their chances of being selected by one. Haverford men have made so creditable a showing in past years that, at least in the case of the men who stand high in their classes, this multiple application is now quite unnecessary. Most of these men, especially those applying at Harvard, Pennsylvania, and Johns Hopkins, are notified of their selection before Midyears.

A question which Haverford pre-medical students must answer largely for themselves, arising critically at the end of the sophomore year, is: "In what subject shall I major?" There is no Pre-medical Major at Haverford. For a few years after the adoption of the Major Concentration plan such a Major was available but, since it possessed certain definitely undesirable implications, it was dropped. After all, Haverford seeks first of all *to educate* its undergraduates; training specifically for a profession is regarded as secondary in its aims. Consequently, as stated in the current College catalogue, "a student may select as his Major almost any field . . . and can be a candidate for either the A.B. or the B.S. degree and at the same time fulfil the requirements for admission to medical school." In accordance with this provision, Haverford premedical students have majored in a number of different

fields, including: philosophy, Biblical literature, sociology, German, mathematics, and physics. As would be considered natural in view of the fact that more work in chemistry than in any other field of study is required for admission to medical school, and since interest is medicine as a career is likely to parallel an interest in science in general, the majority of Haverford premedical students major in this field, with biology, for a similar reason, a close second.

The future holds fair promise that the present friendly relations between Haverford and the admission officers of the medical schools will continue. The prestige of any college ultimately is determined by the caliber of the men who represent it as graduates. With respect to those graduates who have entered the medical field Haverford has been singularly fortunate. Doctors who received their premedical training at Haverford are to be found in many parts of the United States and of the world. In integrity and in accomplishment in one of the highest forms

of public and humanitarian service they stand second to none. The continuance of the work of premedical education and its maintenance on a high plane is not a task for the science departments alone but one in which the entire staff of the college should feel a responsibility. The Director of Admissions should see to it that only boys of promise and high ethics are encouraged to come to Haverford for premedical work. Once admitted, care must be taken that those found unsuitable for any reason are weeded out or, at least, discouraged from continuing in premedical work. Furthermore, it should be impressed upon the student that, at the very beginning of his college course, he is beginning his training for medical service. For those engaged in teaching premedical students—and the number includes practically the entire staff of the College—the slogan might well be adopted: "Hats off to the achievements of the past; coats off for the work of the present and of the future."

Music at Haverford in 1939—1940

LINDSAY A. LAFFORD

Instructor in Music, Haverford College

ONE of the objectives contemplated in my office here was that I should give a course in theoretical music, "if it should be desired." Such a course has been in operation since the beginning of the current semester. It serves to introduce the student to the more mechanical side of written music, embodying notation and time, harmony, strict counterpoint, as well as an introduction to fugue, and is designed to assist the student to perceive more readily what the composer endeavours to convey, and in what manner he achieves his purpose. There are fourteen men taking this course, and, when it is remembered that nothing of this nature has been offered at Haverford before, this figure speaks for itself.

With regard to practical music, voice tests were taken of 53 would-be vocalists and the best selected for inclusion in the Glee Club. The latter has been enlarged from approximately 45 members to 56, in view of the forthcoming collaboration with

Bryn Mawr College Chorus. The first concert of this new combination will take the place of the customary Bryn Mawr Carol Concert in Goodhart Hall on December 17th, and will be repeated in Roberts Hall on the 18th. The programme will consist mainly of carols and four-part choral works for mixed voices, and there will be at least one composition by each of the conductors, namely Mr. Willoughby of Bryn Mawr and myself. It is obvious that the possibilities of such combination are boundless, and the musical horizon of both the girls and the men will be widened to a hitherto impossible extent.

The male voice activities of the Glee Club will be in no wise impaired by its extra work, and a series of male voice concerts to be given at various schools and colleges is planned.

The organization of an orchestra has been temporarily retarded, owing to the lack of string players; but, as there is a possibility of combining with the orchestra of Bryn Mawr College, the project has not been abandoned.

Memory Through a Mist

Through the greyness of afternoon
 And the skeleton shade
 Of maple trees across the grass
 A mist comes creeping
 Slowly, like a fading ghost,
 A mist of thinking, thin and white
 Over the hollows and the water,
 Ghosts of men who thought here
 In the solid towers and the halls,
 Where shouts of boys sound
 Up against the rafters
 And echo in the walls.

Now in the way the trees look
 When the grey of evening falls
 Over the towers,
 The solid towers where the busts of thinkers
 Stand against the walls,
 There is a glimpse of past years
 And the beauty of the solid towers
 Which is fast like a memory,
 And like the slow mist sliding now
 Behind the greyness of the afternoon,
 A view of new years,
 The recollection of bare trees
 And a mist across the grass
 Now only thin and old,
 Then a memory creeping
 Up over the cold towers,
 The solid towers and the thoughts in them
 Stopped blank in statues, hovering
 Just over the roof
 With stars around them
 Like the cool mist blowing
 Along the grass and passing
 Out into the blank space
 Between the trees.

SAMUEL C. McCULLOCH, '42.

Beyond the Bidassoa

COURTS OULAHAN, '42

TUMBLING down from the Pyrenees, the Bidassoa becomes a sluggish trickle by the time it reaches the Basque coast along the Bay of Biscay. At Hendaye, where you cross the international bridge into Spain, its width narrows to about one hundred feet. But the gulf which separates the two countries on each side of the Bidassoa is greater than one of space. When you cross the concrete span from the French side, it is like entering a new world, a world which is living under martial law, where there is no white bread, only thick brown stuff which tastes like sawdust, where a prison term is the reward for criticizing the government, where the scars of a civil war are not yet healed.

But Spain is a world which is seeking rebirth, and you cannot help but admire the effort which its people are putting into the job. Some day, they may reach their goal, and until then we who watched their internal conflict from the outside must not be too critical. Rebuilding the morale as well as the material welfare of a devastated country will be for the present government a task as difficult as that of driving out

communism. A week there—all the time that the military authorities would allow me to stay—convinced me of that.

You start realizing Spain's condition immediately after you have crossed the Bidassoa. With only a few questions asked me and several papers to sign on the French side of the bridge, I wasn't prepared for the three-hour combination third degree and search which the Spanish officials put me through. I must say they were very nice about it, one kind-hearted customs inspector even allowing me to bring in my bicycle duty-free. But, like every other person who crosses that border, until proven innocent, I was a potential spy or "Rojo" (Red) trying to smuggle in money or arms. Knapsack, maps, and even my person underwent investigation. A very meager knowledge of Spanish and the fact that I was in short pants—almost unheard of in Spain—helped to make the situation worse. Finally, to cap things off, I protested when the officer in charge made out my "Salvoconducto" or safe-conduct card for only seven days. The young soldier accompanying me turned red in the face, apologized

to his visibly irritated superior for the foolish actions of a foreigner who didn't know better, and forcibly dragged me out of the room before I could say another word.

Not a very promising way to begin a trip in a foreign country, but I never protested after that when a soldier or policeman told me to do anything. In fact, the whole time I was in Spain, I became a model Fascist who gave the salute in the movies when Franco's picture was flashed on the screen and even tried to sing the Phalangist anthem at a bull fight. Between Irun, the first town across the border from France, and San Sebastian, I found the military everywhere, guarding groups of houses razed by shell fire and flames, and several hundred automobiles, ambulances, and armored cars captured from the Loyalists in the northern campaign. When I saw the red and white sign "Policia" (police), I had my passport out before I got to the barrier placed across the road, where you would always find two or three carabinieri in the queer, three-cornered black hats.

Thanks to the efforts of a mayor who refused to let retreating Republican militiamen set fire to his city, San Sebastian was comparatively untouched by the war. But the human wrecks that fighting makes of men could be seen everywhere. Not half a mile from where

members of the diplomatic corps were bathing on the world-famous Concha beach, crippled and blinded men were sunning themselves on the benches of a park outside a military hospital. You found these men everywhere—in the cafes, walking along the waterfront, at the aquarium. They were not a pleasant sight, especially in the peaceful setting of the Basque coast, with its peaks disappearing into the haze, an azure-blue Mediterranean, and low-lying fishing boats at anchor in the bay. Rather, they were part of another Spain—a Spain which lay half-destroyed, where at least one out of every ten people you met was a soldier with a rifle. That world began once I left San Sebastian and headed for Bilbao on my bicycle.

About two and half years ago, American newspapers were full of what was happening around Bilbao. Driving from San Sebastian, the Nationalist armies were finally able to capture the Basque capital on June 18, 1937. The history of that campaign was still written on the countryside last summer. A half-destroyed bridge on which a squad of soldiers were working, a convent gutted by fire, factories with most or all of their windows out, and, most pitiful of all, an old woman scraping manure off the surface of the road with a knife—unmistakable marks of fighting which spared neither nun nor peasant nor worker. As

I came down out of the mountains into Bilbao itself, dug into the slopes surrounding the city I could still see the trenches and fortifications which made up the so-called "Ring of Steel" defending the capital. Within the city you will find the station still standing as it was when the Nationalists captured it, half shot away, like a ruined acropolis, reminding the Basque who wants independence of a time when his ideal was a brief but real actuality.

Traveling on a Spanish train is not an experience you want to repeat, especially since the Civil War, when a good many carriage windows were shot out and never replaced. Unfortunately, I had to do it twice, to and from Madrid, but my ordeal the first time fortified me for the second journey. Four hundred and fifty miles, fourteen hours in a jolting, creaking third-class railroad car which must have antedated the Spanish-American War, lie between Bilbao and the capital of Spain. Sitting between a sallow looking peasant who, as far as my sensory apparatus was concerned, didn't know the meaning of the word water and a soldier who insisted on using my shoulder for a pillow, I spent a pretty miserable morning. Besides, the heat was beginning to get me and you couldn't obtain any water until the train stopped at a station. My costume—flannel shirt and

short pants—made me an object of continued and curious research on the part of the twelve sweating people crowded into the one compartment. Finally, one woman asked me if I was German—she hadn't noticed I was trying to read some English verse, the only book I had been able to buy. Since Germans were, on the whole, popular in Spain and Americans decidedly not, I said I was a Nazi, and, every time that she would speak to me in German, I would mutter something about "Deutschland Uber Alles." That was as much as she got out of me, but the phrase seemed to please her, and, when she left the train, she gave me a good healthy "Heil."

Between trying to pass myself off as a German and reminding a whining little baggage master who took an unnatural liking to my bicycle that I didn't want it left behind accidentally on purpose, I managed to reach Madrid early in the evening. Even in the half-light of a warm July night, you could see the shapes of what used to be rows and rows of houses flash by the train windows. As I stepped off onto the platform of the North Station, a moon shone through the gaping roof and lit up a dimly lighted interior. Here was desolation all right—but it was only in the full light of day that I realized what a modern city looks like after a three-year siege.

You have the impression in walking about Madrid of a city half between life and death. The clanging trolleys on the Gran Via, the crowds which gather every afternoon in the cafes, the roar of the Metro which was running even during war-time, the traffic lights and the neatly dressed white-helmeted policemen, the packed arena at the Plaza de Toros, the throng of people who spend Sunday afternoon at the world-famous Prado museum, the neon lights of several theaters—that was the living, bustling Madrid. But turn down a side street off the Puerta del Sol, count the women lined up outside a milk distributing station, look closely at the families standing in half-demolished doorways, watch the men standing outside police stations who are waiting to clear themselves, if they are lucky, of charges of being “Reds,” glance down at the famine-drawn face of the woman who begs a few pesetas from the passerby and exposes an arm with a stub where the hand used to be—this was the dead Madrid.

Talking with the people was just as discouraging as seeing the city. A law student whom I met told me of what had happened to his family—his father and uncle shot by a firing squad. Another young man described how, at the risk of his own life, he saved twenty men and women by sneaking them to a foreign em-

bassy. While there were “Terrors” of equal intensity in Barcelona and Valencia, in Madrid alone an estimated 3,000 persons died by assassination and torture, and the stories concerning their deaths are neither pleasant nor printable. Probably as many people died at the hands of the Nationalists, but the fact remains that the personal bitterness stirred up is irreparable. “Can you expect me to sit down in a cafe with a man who fought with the Loyalists and may have killed my brother?”, one fellow asked me. Spain is going through the same process which followed our own Civil War—only in this case, the medicine of economic prosperity and of benevolent national government is not there to heal the wounds.

I had never seen an actual battlefield before I walked out to the University City on the outskirts of Madrid, and I never want to see another. What was formerly one of the world’s finest educational institutions lies there in complete ruins. Where once stood dormitories, laboratories, special houses for foreign students, and a magnificent library, there were shell-holes, trenches, and barbed-wire entanglements. The only signs of life were an occasional sentry and a few lizards who scampered to safety under a helmet when you approached. When I walked over the battlefield, only the bodies and weapons

had been removed, and you had to watch your step since land mines and trench-mortar shells were still imbedded in the ground. On the second floor of the skeleton that was once the University clinic, you could still see the body of a Loyalist militiaman. Whether the soldiers have left him there merely as a curiosity or whether they have been too lazy to take him away, I don't know, but he served the purpose of symbolizing the whole picture of the Madrid battlefield—death and destruction and the denial of human life.

The phenomenon of the Spanish railroad system is that you can catch a train two hours later than another one and still arrive at your destination before the first does. Besides, time tables are the exception, not the rule in Spain. I almost made the fatal error when I left Madrid one Monday evening for San Sebastian, but a chance remark by the baggage-man when I was checking my bicycle in acquainted me with the facts and won my undying gratitude. Settling myself beside a window with a blanket, I tried to get some sleep. The occupants of my compartment, however, were of an entirely different mind. Within five minutes every one of them was talking as fast as he could, in another ten minutes bread, a bottle of wine, and ciga-

rettes were being passed around, and another half an hour saw the life histories of the group unfolded.

Watching what was going on, I recalled what a German had told me in Bilbao. "You've got to realize the misery and human suffering through which these people have gone for the past three years, and, when you do so, you'll begin to understand the viewpoint of the Spaniard today." Remembering his statement, I saw that it was more than mere camaraderie that made these men and women strike up an acquaintance. They all knew they were in the same boat, and, unless they did something about it together, the ship of state was going to sink. For that reason, however much you may criticize it or not, Franco heads a military dictatorship.

As Ambassador Alexander W. Weddell has said, in announcing an American scholarship for the University of Salamanca, "I hope that the scholarship will play a small part in helping the people of Spain and the United States to know each other, to understand each other's problems, and to sympathize with each other's difficulties." One week in Spain gave me, I believe, an idea of what the Ambassador was driving at.

Obituaries

1871

Charles Shoemaker Taylor, a former Vice-President of the Alumni Association and the second oldest graduate of the College, died at his home in Haverford on September 20th.

For many years Mr. Taylor had lived in retirement, but from 1876 to 1880 he was a member of the Board of Managers of Haverford College and from its foundation until 1893 a Trustee of Bryn Mawr College.

Five of his sons have graduated from Haverford and one of his daughters is the wife of Dean MacIntosh.

1872

James Carey, Jr., son of James Carey, Haverford, 1839, died in his eighty-sixth year in Baltimore on October 28th.

A lawyer, LL.B., University of Maryland, '74, he practised in Baltimore until 1888 when he became President of the Carey Machinery and Supply Company, one of the principal distributors of machine tools and supplies in the Eastern states.

1872

S. Franklin Sharpless, a former member of the Class of 1872, died

at his home in Philadelphia in his eighty-sixth year on November 5th.

Retiring from the brokerage business in iron and steel in 1884, for more than fifty years he has been interested in travel and history, being a member of the Historical Society, Travelers' Club of Paris, the Academy of Fine Arts and many other organizations.

1874

Charles Robinson Hartshorne, A.B., and LL.B. of Harvard in 1878, died at his home in Brighton, Md., on September 16th.

A son of Isaac Hartshorne, '44, he was an active undergraduate being President of the Loganian Society, Loganian Orator, Editor of *The Bud* and of *The Collegian*, and a member of the first Cricket Eleven.

A farmer, he had been an active participant in civic affairs in his vicinity, serving as President of the Maryland Health Association and of the Maryland State Horticultural Society. He was also Master of Brighton Grange and General Deputy of the State Grange.

A son, William Davis Hartshorne, Jr., is a member of the Class of 1911 and a grandson,

Charles Hartshorne Ligon a member of the class of 1938.

1886

Horace Eugene Smith, one of the few remaining graduates in the Class of 1886, died at his home in Haverford on June 17th. He was 72 years of age.

After graduation from Haverford, where he was a member of both the Everett and Loganian Societies, he matriculated at Harvard, receiving the A.B. degree the following year.

His life work as a banker and his success therein placed him on the directorates of many companies, but in recent years following retirement from active business his chief interest has been the Lankenau Hospital in Philadelphia of which he was President.

Haverford College owes much to Mr. Smith's generosity and his name is perpetuated in the grandstand on Walton Field and by the "Smith" entry of Lloyd Hall. His wife and two daughters survive.

1887

John Eberly Parker, a former member of the Class of 1887, died at his home in Eaton, Ohio, during the past summer.

Mr. Parker entered Haverford in the Junior Class but removed after a year to enter the nearby Earlham College from which he graduated in 1887 and of which he was later a Trustee.

1887

William Congdon Wood, A.B., died at his home in Mahopac, N. Y., on July 6, 1939.

A publisher and a member of the firm of William Wood & Company, he found time to devote to the study of Zoology and Entomology and was the author of numerous articles in those fields.

A son of William H. S. Wood, Haverford, '59, his family has had many representatives at Haverford, the most recent being a nephew, Gilbert Congdon Wood, 1938.

1892

Miles Atlee Hoffman, an ex-member of the Class of 1892, died in Baltimore, Md., in the summer of 1939.

1894

Oscar Marshall Chase died in the Bryn Mawr Hospital on April 10th at the age of sixty-seven.

"Oscar," as he was lovingly known to at least eighty per cent of the living alumni, served his Alma Mater for forty-two years as Secretary or Bursar and from 1916 as Registrar. A bachelor, making his home in Founders Hall, he was always on the job and his faithfulness became a byword, as might also have been his kindness and generosity had they been known. At graduation he was awarded General Honors and Honors in Engineering, and after

a year of advanced study received the degree of M.S. Then followed two years with the Baldwin Locomotive Works. In 1897 Mr. Chase returned to Haverford, being appointed Secretary and, in addition thereto, successively Instructor and Assistant Professor of Drawing.

1895

J. Linton Engle died at his home in Haddonfield, N. J., on May 14th, in his sixty-fifth year.

Entering as a Sophomore, he won the Prize for Systematic Reading in 1894 and on graduating was appointed an Assistant in the Library while doing graduate work in Latin.

Almost his entire business life was devoted to the field of printing, in which he was honored by election as President of the United Typothetae of America.

As a public citizen in Haddonfield he was President of the Haddonfield Board of Education, President of the Haddonfield Safe Deposit and Trust Company, and a member of many civic organizations.

1896

After months of suffering, death came to Samuel Kriebel Brecht, one of Haverford's more gifted sons and a member of the Class of 1896. A teacher all of his life, mostly in the High Schools of Philadelphia, he was Head of the Department of Mathematics at

Overbrook High School when illness caused his retirement. A member of the Schwenkfelder Society, his activities as historian and editor of *The Schwenkfeldian* from 1904 until his death brought him the degree of Litt.D. In 1925 he was elected an alumni member of Phi Beta Kappa. A son, Harold Walton Brecht, is a member of the Class of 1920.

1899

Kenneth Hay, one of three brothers, all Haverford students, and an ex-member of the Class of 1899, died at his home in Bogota, N. J., on April 13, 1939.

A member of the Football Team of 1895 and a member of the Triangle Society, Mr. Hay was much interested in having boys of the New York area enter Haverford.

In recent years he travelled extensively in the interest of his Paint, Oil and Varnish business.

1911

Alfred Alexander Dixon, an M.A. in 1911, and a graduate of Guilford College, died at his home in Raleigh, N. C., on October 16th. Since leaving Haverford he had been a teacher.

1915

Samuel Wagner, Jr., one of the most active members of the Class of 1915 while in college, being Manager of Cap and Bells and of the Tennis Team, succumbed to the bite of a mountain tick at his

farm near West Chester on May 28th. Following the close of the war until his death he was an active banker in Philadelphia and a member of the firm of Janney and Company.

1921

Dr. David E. Matzke died while playing in a softball game on August 16th near his home in Punxsutawney, Pa., where he had been a practising physician in recent years. Matzke made up his mind early to be a doctor and at Haverford assisted Dr. Babbitt in many ways. He took his M.D. degree at Pennsylvania and his internship at the Punxsu-

tawney Hospital, returning to that town again, after practising in Carmel, Cal., for seven years.

1932

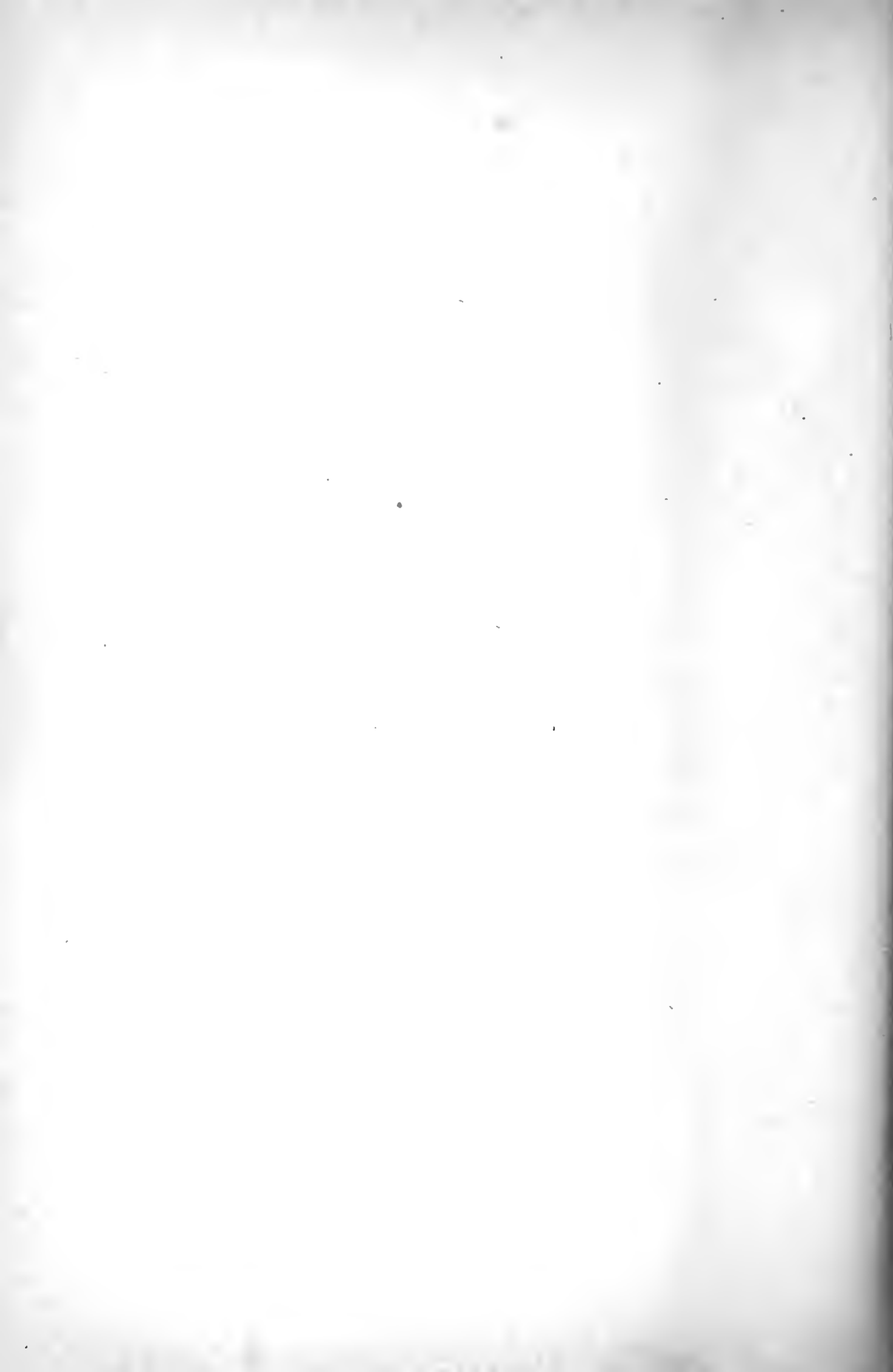
Death came as a release after an illness of many months to Vincent Elmore Morgan of the Class of 1932.

At Haverford he was Manager of the Cooperative Store, President of the Chemistry Club, and President of the English Club.

A Chemistry Major, he continued his studies at Harvard University where he received the Ph.D. degree and an appointment as Tutor and Instructor in Chemistry.









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Haverford Admissions

ARCHIBALD MACINTOSH

Dean of Freshmen and Director of Admissions

THE perusal of the section on "Admissions" in almost any college catalogue will in all likelihood leave the reader completely baffled. In a matter of such great importance both to the applicant and to the college this is unfortunate, though quite understandable when we consider the complex nature of the problem dealt with.

One of the most important developments in education in the last twenty years has been a growing recognition of the differences between individual students. For a long time colleges and universities alike have professed their interest in treating the student as an individual, but the large institutions are overwhelmed by numbers and the small colleges have not as a matter of fact practiced what they professed. A small college is in an ideal position to give real individual attention to each student, and it is especially appropriate that there should be a keen appreciation of this at Haverford when we consider the traditional position of the Friends in their respect and regard for the individual.

A second development of recent

years has been an increasing emphasis on making the shift from school to college as effortless and as continuous a process as possible. The general trend throughout the country finds its counterpart at Haverford. What in the past was everybody's and nobody's business is now the chief concern of the admissions officer and his committee. Steadily we are working away from what was at times a haphazard and in some respects chaotic state. A more sensible and orderly process seems to be the result, a process peculiarly characteristic of a small college.

The essential point of view underlying the trends referred to above is not whether the candidate pass certain examinations, but whether the candidate can cope successfully with the scholastic work and the extra-curricular opportunities offered by the college. A growing awareness of the limitations of certain specific examinations has led to the demand for more information on the candidate. The emphasis has shifted and greater flexibility in the method of admission has come. This does not mean a lowering of standards, but it does

mean a more sympathetic and accurate treatment of the candidate and a more intelligent and economical procedure for the college.

II

Because at present the entering class at Haverford numbers somewhere between 85-95, it is possible to exercise a care and a discrimination which would be impossible if the class numbered in the hundreds. Through the application of the devices described below, the admissions officer gets a fairly complete picture of each man. If the size of the application list is sensibly controlled, by examination time there are usually approximately 110-130 men taking the examinations. No useful purpose is served by abortive attempts to build up the list simply to allow one to boast of its size. No admissions officer, if he is honest, can say that he is turning away many good candidates. This in the face of some grandiloquent statements one occasionally hears flying around the country.

The devices that are used in forming a judgment on a candidate include the school record, a statement from the principal or headmaster, information from other sources, the personal interview and the examination ratings. Combined these give a comprehensive picture. And it is the proper combination of these components which calls for skill.

The admissions officer who wrote a rigid formula would do so to his and the college's cost.

The school record, giving a statement of the work over a four-year period, requires, from school to school, careful interpretation. It indicates the amount of work done, the quality as judged by the teachers, and perhaps most important of all it gives the rank of the candidate in his class, an extremely significant piece of information. Added to this is a statement from the headmaster which in some cases is so pertinent that no other material is really necessary. Increasingly the schools are improving their records to include a mass of data which no bare recital of marks can even suggest.

The personal interview is another device which lends itself to the procedure at a small college in a particularly effective way. When an admissions office is handling large numbers, only a very limited application of it is possible, however much its broad use may be desired. One interview—or better, a series of them—gives the opportunity for gathering information that is not available otherwise. It enables the admissions officer to make a judgment as to whether or not the candidate will fit into the student body, and it gives the opportunity for a general impression that cannot be formed from the written record no matter how complete that may be.

The personal interview has its dangers as well as its advantages. Unless one is fully aware of the pitfalls he may leap to conclusions which later performances do not confirm. In its use the experience of the interviewer counts heavily.

In addition to the school record and the interview, there come letters from other friends of the candidate expressing observations and giving information that can be obtained in no other way. Teachers, physicians, ministers, club leaders, camp directors, friends of the family all have pertinent things to say.

And finally the examinations. The use of the College Board examinations has, in the past, frequently focussed the attention of students and their parents on this aspect of the admissions procedure too exclusively. There was a time, both at Haverford and elsewhere, when too much stress on examination marks alone was bound to bring about this result.

Since "over-emphasis" on entrance examinations has made so much trouble, the reader may well ask why bother with the College Board examinations at all. To this the experienced director of admissions will reply that the variation in grading from one secondary school to another is so far beyond belief that some such system of standardization as the Board examinations provide is absolutely necessary. Passing over extreme cases like that of a

high school in western Pennsylvania which gave a certificate grade of B (85) to two students who registered 30 and 17 at Haverford, we are continually faced by stock situations which cannot be familiar to most readers of this article. For example, a boy attending one of the very best high schools in suburban Chicago finished his second year with grades in English, Latin, French and Mathematics of 95, 90, 90 and 90. On transferring to one of the great eastern preparatory schools, he took certain examinations and was re-rated in the same subjects at 55, 44, 62 and 75! In approaching a uniform national standard, the College Board examinations offer a service of very great value (provided it be not overemphasized); the value of this service is made the more evident when we remember that Board examinations are required not only at Haverford, but also (among many other institutions) at Yale, Harvard, Princeton, Vassar, Wellesley and Smith.

The change in the examinations themselves, the change in reporting the results, the number of examination plans now available, all tend to correct many of the difficulties of the past.

The examinations fall into two groups: those which are tests of general intelligence and scholastic aptitude, and the subject-matter examinations. Many of the school records contain ratings on psychological tests of various

kinds. Each candidate is required to take the Scholastic Aptitude Test of the College Board. Over a period of years this has proved to be an extremely useful adjunct to the record.

The subject-matter examinations may be taken under one of three plans. The longest of these may involve as many as ten examinations, the shortest only three. It would seem that a plan which calls for examinations in English, in one of the candidate's two foreign languages and in elementary mathematics is not a heavy examination requirement. And it is further worthy of note that the Board reports to the college what the candidate did on the particular examination in comparison with the others who took it, leaving it to the admissions officer to draw his own conclusions as to whether the rating is or is not satisfactory. With the examinations giving a more adequate description of the candidate, the admissions officer has a better chance at a sensible interpretation of the results.

From the sources mentioned above we have, when all is assembled, a comprehensive picture of each candidate. On the basis of this the application is accepted or declined. If the candidate is accepted, there is adequate information to guide in planning the college course and in making a prediction of college performance.

III

One measure of the result of the program is the standing of a class on the American Council on Education Psychological examination, which is given to each freshman class late in the fall. Since 1927 the Haverford freshmen have led the group reporting scores. Measured in these terms there has been little variation from class to class over this period.

A second measure has been the number of academic casualties. It is true that the number of men leaving college has varied considerably from class to class, but here many factors other than ability to do the academic work of the college play their part.

A third measure is the impressive regularity with which the Haverford graduates are admitted to the best graduate schools; and further, the fine account they give of themselves in these schools.

A fourth indication—and it is to be admitted, a rather vague one—is the general reaction of the faculty. While some variation might not occasion much comment, any considerable deviation would doubtless bring immediate and pointed comment from the teaching staff.

IV

As has been indicated, there have been over the last twenty years gradual but nevertheless important changes in the admissions procedure. Changing con-

ditions in secondary education and perplexing and far-reaching problems in the world about us forecast more of such changes. To meet these changes the admissions program must be kept sufficiently flexible to meet the new conditions, sufficiently forward-looking to foresee new problems, and sufficiently steady to preserve the character of the college as we wish to see it preserved.

One of the improvements indicated above lies in the directing of the student along lines which enable him to make intelligent decisions in regard to his future work, at a time when this is very important. Increasingly the schools are working on this, and less frequently do our candidates present themselves with certificates of courses passed and empty minds as far as the general direction of the college course is concerned. It is in the recognition of the need for a more

thorough study of this problem of direction, and in the development of a more adequate plan for its continuance through the four years of the college course that we find one of our most interesting and important problems.

V

Several years ago a member of the Haverford faculty sent to the admissions office the following quotation which he had come across in his reading: "After forty years of teaching, I am inclined to think that the scholastic reputation of the college depends to a greater extent upon the skill with which it recruits its students than upon what it does with them after they get there." If this be true, it places great importance and an ominous responsibility on the admissions officer. At the same time it implies a responsibility from which no interested alumnus is free.

The American Foreign Service and Haverford's Interest Therein

JOHN G. HERNDON, PH.D.

Associate Professor of Government

EVERY September the Civil Service Commission holds written examinations to test the fitness of applicants for appointment as Foreign Service officers of the United States. Those passing with "sufficiently high marks in the written tests to indicate probable qualifications for the work of the Foreign Service are informed of the date on which they may appear before the Board of Examiners for the Foreign Service in Washington for an oral examination." The purpose of the oral examination is "to ascertain the extent to which the candidates are qualified for the proper performance of the duties of the Foreign Service from the point of view of their character, address, judgment, general education and culture, contemporary information, practical experience, and apparent business capacity." The orals are held usually in the early part of January. The candidates who receive a passing mark on the whole examination are certified to the Secretary of State as eligible for appointment as Foreign Service officers. As

vacancies occur in the Foreign Service, appointments from the register of eligibles are made in the order of their examination grades. Usually a new list is established about February 1, but the name of anyone not yet appointed from the old list is transferred to the new list and continued for a total period of two years. Generally all eligibles receive appointment.

The written examinations last three days. The subjects they cover are varied indeed. The first morning's questions in the 1938 tests, for example, included analyses of information presented to the candidates which dealt with Postlethwaite at Cambridge, medieval duels, British Friendly Societies, buffets as articles of furniture, the types of bagpipes, the diagnosis of acute bronchitis, feoffment in real estate law, impeachment processes in England, the law of heirlooms, schools of design, appanages in France, the influence of Donne upon English literature, Welsh and Irish bards, the general law of carriers in modern Europe,

didactic poetry, and the kinds of spun silk. Then after a half-hour rest mathematics was tackled. The subjects covered include arithmetic and simple problems in algebra.

The first afternoon's examinations consist of about 400 specific questions on geography, resources, languages, international relations, banking, commercial law, American government, sociology, modern European history, economics, international law, religions, comparative government and American history, linguistics, writings of American, British and French statesmen, and the classification of words. This last mentioned topic is a test of the scope of the candidate's knowledge of the English language, so far as terms pertaining to art, biology geology, law, music, medicine, theology, rhetoric, and related subjects are concerned. For example, under what classification would you put: iatrology, implosion, izzard, jasper, jinn, jussive, Kaaba, lambdacism, lucerne, mediopassive, neume, newel, oboe, occiput, and ormolu?

The next two days are given over to special examinations on international, maritime and commercial law; economics; history and government; and modern languages. They are more difficult than the usual final comprehensive examinations given at our better colleges and universities, because the candidate for the Foreign Service must possess

a comprehensive knowledge of all the subjects mentioned, not the usual one or two required of college seniors.

Between 500 and 800 persons take these tests each year. Somewhere between 150 and 175 usually pass the written exams. Only about thirty survive the orals with passing grades. A speaking knowledge of French, German or Spanish is required, and tests therein are a part of the oral examinations.

Persons appointed begin their career as vice-consuls. Transfers of officers between the diplomatic and consular branches of the service take place whenever in the opinion of the highest State Department officials they are warranted. Promotions are made through the eight classified grades of officers and are based on merit. Every year sees an increased number of even the highest positions filled by career men.

Haverford's interest in this subject goes back to 1929-30. The year before, the present work in Government had been begun by offering a half-year course in American Government. Then it was lengthened to full year status and a course in International Relations was added. Soon there were added to our curriculum courses in Comparative European Governments, International Law, American Constitutional Law, and studies for Government majors in Political Philosophy. All these things were done to comply

with the terms of the William Penn Foundation endowment for the establishment here at Haverford of a chair in Political Science and International Relations. Those terms specify that "adequate undergraduate instruction in the theory and practice of our own and other governments" shall be given, as well as "in the history of past attempts to secure international agreements and in the methods by which good international understanding may be promoted and maintained." With these Government courses added to the excellent work already offered in History, Economics, the modern languages and English, the Haverford student who desires fundamental work preparatory for the Foreign Service examinations has it available to him right here.

In those first classes in American Government and International Relations was John Freeman Stone. He was also a delegate to the first Model Assembly of the League of Nations in which Haverford participated. There he won the praise of all participants by his tactful presentation of the claims of Estonia which Haverford was representing. After graduation in June 1930 he spent a profitable and happy summer in Geneva improving his French and acquiring a first-hand knowledge of the League of Nations. The following winter he took and passed the Foreign Service examinations and during the

next summer was appointed to his first post, Berlin. His next assignment was to Warsaw (where the writer spent nearly a week with him in August 1935). In May 1936 he was transferred to Tientsin and remained during the exciting times of the Japanese attack on that city and until recalled to Washington late in 1938. He is at present one of the three Foreign Service officers especially assigned to assist Secretary of State Cordell Hull.

In the same class with John Freeman Stone was Brewster H. Morris and in the class of the next year, 1931, was van M. Wilson. These men studied further at Oxford University and were appointed Foreign Service officers after passing examinations taken in 1935-6. In November 1936 Mr. Morris was assigned to Montreal and later to Vienna and Dresden, where he is now stationed. Mr. Wilson entered the service in July 1937, went first to Guadalajara, and was transferred in 1938 to Cairo. In April 1940 he goes to Alexandria.

William Norman Fraleigh, after graduating in June 1938, prepared for his examinations at one of the special schools in Washington. After passing them he was appointed March 2, 1939, and assigned to Naples, where he is now serving.

And now we are happy to learn that Walter William Duff, Jr., also of the Class of 1938, who

spent his junior year studying in Paris, has just been notified that he passed the 1939-40 examinations.

There are in the United States ten men's colleges having an endowment of \$3,000,000 or more and an enrollment of less than 1000 students. They are Amherst, Bowdoin, Hamilton, Haverford, Lafayette, Trinity, Union, Washington and Lee, Wesleyan and Williams. The Register of the Department of State for October 1, 1939, shows that former students of the institu-

tions just enumerated who were, on the date mentioned, either State Department officers or Foreign Service officers were as follows: Amherst 3, Bowdoin 2, Hamilton 8, Haverford 4, Lafayette 1, Trinity 6, Union 2, Washington and Lee 12, Wesleyan 2, and Williams 8. If we only take into account, however, appointments of Foreign Service officers since January 1, 1931, the striking result is: Haverford 4, Washington and Lee 3, Bowdoin 2, Hamilton 1, and none for the other colleges mentioned!

Reprinted from "The Stack"

an undergraduate publication edited by
CLYDE NICHOLS, '41

SAINT-MIHIEL
DAVID A. COOLIDGE, '43

Under a boundless canopy they lie,
A teeming myriad of bristling gnomes
Misshappen by the distant throb of drums . . .
They landed and marched—so straight and strong—
And fought, an act which He Himself called wrong—
No matter. They faded in the curling, choking smoke
And cursed their way to Hell before they broke.
Oh you should see their subterranean pranks,
While above, their hallowed tombs stretch endless toward the sky.

WANTED: PEACE
COURTS OULAHAN, '42

WERE I to describe the mood of the British People in these early days of 1940, I should describe it as a compound of bewilderment, dismay, and resolution. But it could not be said that the mass of British people are in any doubt as to why we are today at war . . . We know we are fighting for our own lives. We know we are fighting for our own liberties. We are not enjoying it; we are hating it from the very depths of our souls. But there is no alternative."—Harold Nicholson in *The New Republic*.

What Harold Nicholson has to say about the English point of

view applies, more or less, to every country which today is either actually at war or on the brink of being drawn into the conflict. It is an ironical situation, this stolid determination to fight combined with an intense hatred of the destruction which war reaps. The second World War is indeed the war nobody wanted. Even Hitler, as late as October, protested his desire for peace. Yet the peace which the German Chancellor envisaged struck no sympathetic note in the hearts of Englishmen and Frenchmen and, we might add, most Americans. For this magic word, wherein lies all the hope and se-

curity of the world, has as many meanings as the colors of the rainbow.

To Germany—and here we must take Hitler as the spokesman of his people—peace must bring a new kind of twentieth-century mercantilism. Demands for hegemony over smaller and weaker neighbors which are to serve as a sort of hinterland for the Reich are merely a revival of a continental system based on the relationship which existed formerly between Spain and her South American empire. Nazi leaders call this a “new order” in Europe. Yet the idea represents a return to the days when mercantilism, with its concomitant nationalism, bled the world white, until an international system anchored in the British and French empires came into being at the beginning of the nineteenth century.

It is all very well to criticize the imperialism of the last century, but the era saw a world comparatively free of major wars, at the same time prospering under free trade and the benefits of the Industrial Revolution. In the field of diplomacy, England took it upon herself to maintain the *status quo*, and a good job she made of it until 1914. The World War, of course, knocked the breath out of the world, and the collective security of the post-war era failed miserably. But this does not mean that a system which kept the peace for

nearly one hundred years should be chucked over for the mercantilism which Germany and, more recently Russia, propose today. Such a remedy is worse than the disease. Rather, the problem consists of building a new and better order on what will remain of the old one after this war is over.

Proponents of this school of thought call for unrestricted world trade, a better distribution of natural resources and capital, and, as the most important aim, some sort of world federation. Clarence Streit in *Union Now* has suggested a federal state based on our own Constitution, others less optimistic call for strengthening and expanding the League of Nations. Numerous organizations have been set up here and abroad to encourage discussion of these plans for the kind of world we want when the war ends. I have no doubt that these men and women are conscientious in their endeavors. On the other hand, I consider them extremely overconfident. Not only that, they are basing their plans on a very uncertain premise; either there will be an early truce or the Allies are going to win.

London and Paris, as well as Berlin, have reiterated time and again that this is a war to the finish and that nothing short of complete victory will satisfy them. For that reason, I hold the chances of some sort of truce en-

tirely unlikely. It has become plain as a pikestaff that the world is not large enough for both Germany and the British Empire. Any armistice at the present or in the near future would merely be another Munich and you would only have hostilities postponed for six months at the most. From all the signs, the world is in for a conflict which will cast the four years of the last one into the shadows. And just who is going to win the war is as uncertain as how long it will last.

What role then, under the circumstances, must the United States play? As I pointed out before, the only kind of a peace on which a new world order can be built will be an Allied victory. Even then, the bitterness which war stirs up may have obviated any hopes for justice being dealt to Germany and whatever friends she may have won during the conflict. But there is far more chance of bringing about a new international order if the English and French empires are not destroyed. The primary condition for world peace thus becomes an Allied victory. And the problem for the United States, if it is at all interested in bringing order out of chaos, lies in bringing about such a victory in the minimum of time with the minimum of damage to the social and economic structure of western Europe.

I am not saying that we should join the Allies tomorrow, but I do think every bit of material

aid possible should be placed at their disposal. If Germany considers such an unneutral act worth declaring war against us, I see no reason why we should not reply in kind. Indeed, one prominent writer has said that, had the Reich known that we would come to the aid of England and France, Hitler would not have invaded Poland. I hope that it would not be actually necessary for us to enter the war, but we could very well play the same role that Sweden has fulfilled in Finland. Even if we were finally forced to declare war, I have no doubt that our entrance would mean a speedier defeat of Germany. While we have a very important role to play in rehabilitation work once hostilities are ended, the fact that we took no part in the war on the side of England and France might very well mean that we would not be asked to attend the peace conference.

If England and France are left to fend for themselves, it is not inconceivable that they will lose the present war. At the very least, they can eke out a Pyrrhic victory which will leave Europe so exhausted that all the money in the world can not restore it. Not only this, but the bitterness that was incorporated in the Treaty of Versailles will seem insignificant to that which will follow this war. You cannot reconstruct the hearts of men and women who have had

their families broken up, their homes destroyed, and their country shaken to its foundation.

As Walter Lippmann has said, it is the character of a war which determines the nature of the peace that follows. While America today expects to be instrumental in formulating a just peace, we must not be too optimistic. The longer the war continues, the harder it will be to bring reason to the council table. The sooner the conflict is brought to a close, the less will be the destruction to repair in men's minds and bodies.

You may accuse me of being a warmonger. Please don't misunderstand me. I hate war as

much as any man. I do not want to die. But I do not think that because I do not want to die thousands of other youths like me should perish. In my mind, America's fate is inextricably bound to that of England and France, just as Sweden's future lies in the outcome of the Finnish war. While infection rages in one limb of the body, you cannot say that the other will not be affected. The body will stand or fall according to the number of antibodies which can be mustered to meet the attack of bacteria. The same applies to this world we live in.

TEARS OF THE TWILIGHT

R. CRYAN, '43

Wish I could weep,
Wish I could pray,
Wish that the wind
Would whirl me away.
Where is the light
That fled in the night?

Gone is the dusk,
Soft as a dream,
Broken the reeds
That sighed by the stream.
Where is the light
That fled in the night?

Whispering wisps,
Wisps of the moon,
Sadly they died,
Like songs in a swoon.
Gone is the light
That fled in the night.

Sounds of farewell
Lingering on,
Haunting and dim . . .

Edward Drinker Cope (1840-1897)

THE HAVERFORD PERIOD OF AMERICA'S GREATEST NATURALIST

E. R. DUNN, '15, *David Scull Professor of Biology*

ON JULY 12, 1864, the Board of Managers of Haverford College appointed a 23-year-old young Friend as Professor of Zoology, and the next day he was given the degree of A.M., Haverford. By this action, a master's degree and a Professorship were conferred on a young man whose formal education amounted to three years at Westtown School, and it may lay claim to the first definite recognition of a genius. The Philadelphia Academy of Natural Sciences made him a Curator in 1865; he was elected to membership in the American Philosophical Society in 1866, and to the National Academy of Sciences in 1872. In 1886, Heidelberg University, then celebrating its 500th anniversary, conferred the Doctorate on Cope and on one other American.

When Cope came to teach at Haverford he had published 39 papers, nearly all of them on Reptiles and Amphibians. The first of these, published when he was 18, revolutionized the classification of salamanders. He had returned from a year of study in the museums of England and the

Continent loaded down with information, on the basis of which he, while at Haverford, published papers that emended the classification of the frogs and lizards.

He came to a college of 57 students under the Presidency of Samuel J. Gummere; a college rather ambiguously run, for control was shared by the President, a Superintendent, and the Managers. Serious disorder took place during his first year; there were some expulsions, and the College opened in 1865 with only 37 students. The histories of Haverford allude to this, but are not precise on the subject. Cope taught a required class for Sophomores, which, if it lived up to the catalog statement, was a complete survey of living and extinct plants and animals. Cope also, to his surprise and chagrin, had to teach some chemistry, a subject for which, as his letters to his father show, he was by no means prepared.

He taught here through the academic years 1864-5 and 1865-6, and through the first half of 1866-7. During this period there is evident a change of interests. He becomes interested in fishes,

and describes a blind catfish from Conestoga Creek; in whales—he mentions a specimen he saw in Spetember 1865 in the Niagara Falls Museum, and he may have studied it on his honeymoon; and fossils begin to absorb him. His first paper on fossils was written and published while at Haverford. Prof. Leidy had received a fossil amphibian from Ohio and had turned it over to Cope to study and describe. The papers published by him, 1864-7, number 34 in all. Eleven are on reptiles and amphibians, 7 on whales, 9 on fossils, and 5 on fish.

Since his major work after leaving Haverford was on fossils, it is apparent that his Haverford years were a turning point in his career.

He was married just after his first year at Haverford, and his only daughter was born just after his second year here. This daughter, Julia, and her husband William H. Collins, '81, were for many years connected with the College and resident on the campus.

After midyears, 1867, Cope's permanent connection with Haverford ceased. He is said to have resigned on account of ill health, but as we find him in February of the same year trying to salvage a stranded whale at Barnegat, in March working on Agassiz' Brazilian collections in Cambridge, and in the summer collecting in southwestern Virginia (a trip from which Prof. Leidy, but not Cope,

returned because of ill health) it is possible that he found his true calling in research rather than in teaching. He is listed as "Lecturer" to Freshmen at Haverford from 1871 to 1878, in a required Zoology course, concerning which I can find nothing additional to the bare statement in the catalogs for those years. These were the years of his major expeditions to the western fossil fields.

Cope's later career had no official connection with Haverford. He held a Professorship at the University of Pennsylvania from 1889 to the end of his life, but he was always a free-lance worker. He described over a thousand species of extinct forms, and about the same number of living reptiles and amphibians. His working career began in 1858 and ended only with his death in 1897. During this period of about forty years he wrote nearly two thousand separate scientific articles, an average of three per month. While some of these papers are very short, some of them are over a thousand pages long and are copiously illustrated.

While Cope's connection with Haverford was brief and he seems not to have influenced the College, the years here were extremely important ones for him. In any case it is worth while to remember that for a short time Haverford had on its campus one of the most extraordinary geniuses this country has produced.

Selected from Unpublished Under-graduate Material

by MALCOLM KIRKPATRICK, '42

SICKBED

S. C. McCULLOCH, '42

Two great big eyes
 Peek
 Widely
 Out over the cover
 Quick
 Roll slowly out of the head
 And the sweet old middle-aged ladies
 Eddy gracefully round the bed
 The face there's gone
 Cheeks
 Blushing
 Lip wrinkled too rubber
 Thick
 Float growing noise in the hall
 Around around the old ladies
 All the world is a great eyeball
 And the wall in the corner is blinking light
 A whirling forever in singing white

ALMOST FORGOTTEN

S. C. McCULLOCH, '42

I know it's lovely dear
the curtains and the globe
of crystal the sea view
this room this day and you
but may I keep these flowers here

look at the waves roll and the gulls
wheel and wing away
over the cove

forever
 real and complete as love
 but always another
 do you mind the flowers here

the gulls are like our love
big circles winding round themselves
the world and all and
still too vast to see the
broken coral on the bar
bits of pretty things almost forgotten
may I have my flowers here

SOCRATES

HENRY W. JOHNSTONE, JR., '42

He did not hasten. On this golden night
 Cool moonlight eddied round his sandalled feet,
 And while he walked he wondered: Am I right?
 Is Knowledge Virtue, dialectic sweet?
 Protagoras proves Virtue can be taught,
 and Herakleitos holds . . . but what of these?
 For what *is* Truth? I *know*. Would wars be fought . . . ?
 He looked up, thought of Alcibiades.

Xantippe! As a fleeting shooting star
 Inquiring eyebrows quivered with a frown.
 Philosophy! Explain what women are!
 hah! . . . Euthydemus! . . . Strange sophistic clown!
 Then Socrates saw Saturn; as it spun
 Knew Beauty, Knowledge, Virtue, Truth, are One.

 RESOURCE

DAVID CHAMBLISS, '41

But then I drank from the springs of my own heart,
 Waters that ran out there;
 Cool waters . . .
 That trickled into my thirsting soul.
 And I was refreshed;
 And I remembered many lovely things.
 Sorrow left me.

Something About Forestry

HALSEY M. HICKS, '29

U. S. Forest Service

WHEN forestry received an impetus by the establishment of the C. C. C. and the expansion of other conservation work, a lack of trained men to carry on this work was apparent. Practically all qualified men were soon employed, and for several years the graduating classes of forestry schools found ready employment. In more recent years the expansion of government forestry work has slowed down. This, coupled with the fact that enrollment of students in the forestry schools rose sharply, has again created "hard times" among graduating foresters.

In choosing a profession it is dangerous to be guided by present opportunities for employment. This is particularly true where a large percentage of the employment opportunities are with government service and where expansion is apt to be irregular. A better basis for choice is an estimate of the individual's qualifications in the particular fields that the profession offers. Fortunately, the varied activities of foresters offer opportunities for many types of individuals. There

are even limited opportunities for those with "a strong back and weak mind," provided the mind is not too weak. While enjoyment of the out-of-doors increases a forester's pleasure, it would be foolish to become a forester because one likes to fish and hunt. Due to frequent transfers, the chances are that to fish and hunt at all he will have to get the more expensive non-resident licenses.

Opportunities in the United States Forest Service are varied. The administrative branch is concerned chiefly with the administration of National Forest lands. The types of work are as varied as the lands, and usually fall within one of the seven divisions of this branch: fire control, timber management, wildlife management, watershed management, recreation, and engineering. The man in the field administering this land is the District Ranger. The story-book idea of a ranger, as a man who lives off in an isolated cabin and rides one of Hollywood's best horses, does not hold in many places today. Due to improved transportation, the size of his district

has been increased, and he is probably living in one of the larger settlements in his district. He is likely to have an office, and if his district is an active one, several assistants.

The District Ranger may be on a Western forest far from transportation facilities. The timber may be inaccessible and therefore not merchantable, but it must be protected from fire so that its watersheds will be protected, and so that the timber will be there when, as, and if it becomes merchantable through improved transportation. There may be cattle and sheep men who are dependent on the grazing land in the forest for their livelihood. Another forest may have an active demand for forest products to support local industries. The timber will be sold and cut in such a way that the forest and its local industries will be perpetuated. In the Southwest there may be a forest so scrubby that there is not a merchantable stick of timber on it, and never will be. Nevertheless it is essential that fires be kept out and erosion prevented, because a large urban and agricultural area is dependent on its water resource. On some of the newer National Forests, on cut over land, the problem may be to get a new forest. In the Lake States that may involve planting and fire protection, or in the South fire control and fencing against hogs. In the latter area many ticklish situations arise

because the native population has been used to letting hogs run wild, and burning the woods every year. Another forest may have heavy recreational demands. The forester will have to correlate demands for hiking, skiing, and camping facilities with the other uses of the forest, probably on a limited budget.

The administration of National Forest lands is not the only activity of the Forest Service. While these forests cover some 162,000,000 acres, not all of this is forest land. For every acre of national forest there are about three acres of privately owned timber land. From the standpoint of timber production, this land is even more than three times as important as the national forest land. The most productive lands are privately owned because the federal government did not start acquiring forests until most of the best and most accessible land had been transferred to private ownership. There are certain factors in the nature of private lands which make the practice of forestry difficult. One of these is that our financial structure is based on quick liquidation. A forest under sustained yield management is liquidated gradually; in fact it can hardly be said that it is liquidated at all. Only the growth is liquidated, and that is done by removing the trees which are no longer making a satisfactory return in the way of

growth on the invested capital. Then, too, in growing timber there are certain risks which are not yet considered insurable. If a private owner could insure his forest so that a disastrous fire would not wipe out his entire investment, he would feel more like letting his investment grow. As fire protection is improved, insurance may prove more attractive. Hurricanes are something else again, but fortunately they are not as frequent as fires. Another difficulty is that forests have what we call multiple use values. In mountainous regions they have a value for protecting watersheds. They have a social value for maintaining employment. They may also have a value for recreation and wildlife. The private owner is seldom compensated for all of these values.

Various states are making efforts to solve their own forest problems. They are acquiring land for state forests and aiding private owners in the solution of their problems. State Forests are usually smaller than National Forests, and aimed toward state rather than national problems. They may alleviate a local maladjustment of land use, or they may supply a local recreational need. However, many of the states in which the problems are most acute are themselves financially unable to carry on the necessary work. In some sections of the country, counties and towns are becoming interested in fores-

try and are acquiring lands sometimes through tax delinquency and sometimes through purchase of watershed areas.

To help the states and private owners in solving their problems, a State and Private Forestry group has been established in the Forest Service. Its purpose is to help private owners practice forestry on their lands and to cooperate with the states, at the same time correlating their activities with the National forest policy. The federal government cooperates with the states in fire protection, in the distribution of planting stock and in helping farmers manage their woodlands. In these lines the federal government supplies part of the funds to which are added state and private funds.

At the time of the New England hurricane a special administrative unit was set up. This New England Timber Salvage Administration helped to salvage the down timber and to reduce the subsequent fire hazard. So far, over half a billion board feet of logs have been salvaged and sold to this unit which is sawing them into lumber, or, where water storage is available, storing the logs in water for future sale. Probably the government has salvaged as much timber as all of the private mills combined. An extra fire hazard will be present for a good many years but substantial progress has already been made in reducing the danger in

places most susceptible to conflagration.

The land acquisition group studies possible additions to the National forests, planning where additional forests are most needed and then carrying through the job of acquiring these lands. The Forest Service is working from two directions to solve the forest land problem. One is to increase public ownership in areas where continued private ownership is not likely to prove profitable, or satisfactory from a national point of view. The other is to improve conditions for private owners so that forestry can be practised on a larger share of the private lands.

An additional approach to improving forest practice and the living conditions of those dependent on the forests, is through a better knowledge of forests. Much forest research is of such a long time nature that only a government agency can undertake it. Twelve regional forest experiment stations have been established, several in conjunction with universities. These stations have experimental forests where principles of forest management, range management, forest economics and forest influences may be studied. The specialists in Forest Genetics, Entomology and Pathology occupy an important place. A laboratory for the study of forest products has been established in Madison, Wisconsin, and this laboratory has been in-

strumental in bringing about a better utilization of our forest resource.

The Forest Service offers a fascinating career to one interested in the relationships between people and land. We are beginning to realize that forestry is not merely the business of growing trees, but is an intricate adjustment between human resources and land resources. How great a share of these problems the Forest Service is given to solve, depends largely on how well the Service acquits itself on the jobs it has been given already. While it is difficult to predict just what future opportunities in the Forest Service will be, there is need for a larger publicly owned forest area, and there is strong pressure for more public cooperation on private lands.

Entrance to permanent positions in the Forest Service is usually through Civil Service examination. This examination is open to graduates of approved schools of forestry, and is given when the need for new men arises. Initial assignments are apt to involve considerable travelling. Advancement depends on the individual's own ability.

While in the past the Forest Service has been the chief employer of foresters, there may be broader opportunities in the future. Other government agencies employing foresters are: The National Park Service, The Soil Conservation Service, The Bu-

reau of Internal Revenue, The Indian Service, and The Federal Land Bank. The various state forestry departments are expanding as fast as funds will permit. Some counties and towns employ foresters. Industry now recognizes its responsibility to grow its raw material, and some of the larger lumber and paper companies already have forestry departments. Undoubtedly, others will follow their lead. The remainder of the forest land, which is held by many individuals in small parcels, presents a knotty problem. Many suggestions toward its solution have been advanced. Perhaps the most likely to succeed is cooperative management, with a group of owners promising sufficient business so that they are not at the mercy of portable mill operators and cordwood dealers. A cooperative group could afford investments in equipment for processing their products which the individual owner could not. There is going to be an increasing emphasis on marketing, and managers for co-operatives will be in demand. As far as possible, these men must combine a knowledge of forestry, selling ability, good contact work, imagination in finding new uses for fuelwood and other forest products, and a knack with machinery.

There are certain peculiarities of the forestry profession which make it difficult for a forester to "hang up a shingle" as a doctor

or lawyer does. In the first place his prospective clients are not aware that they need his services. Forestry is such a long-time proposition that his clients would not be able to judge whether he was a good forester or not. Poor work does not show up as quickly in a forest as it does in a human being. In the East we have an added difficulty in that the established lumber industry is not geared to make satisfactory use of the low quality wood which we should remove from our forests to get them started growing high quality wood. A fairly heavy investment may be needed in a processing plant to utilize the wood we have.

The Haverford student who wishes to prepare for a forestry career has two alternatives. He can transfer to some school giving a forestry degree, or he can complete his course at Haverford and then go to a graduate forestry school, getting a master's degree in two years. Although the second alternative may take a year longer, I think that it is to be preferred. What courses should one take at Haverford? The forestry school bulletins will give an imposing list of prerequisites. This can be used as a guide. I found that my having had surveying at Haverford enabled me to devote more time to strictly forestry courses. While I have never had the opportunity to use my heat engineering course, it has enabled me to follow a hobby

more intelligently: if you are particularly interested in wood utilization, that course might be taken with particular emphasis on wood fuels, and the Strength of Materials course with emphasis on wood materials. If you are especially interested in the economic phases, naturally you can get a good economics background at Haverford. Forest products being heavy, transportation enters strongly into the economic phases. While the social problems of forest areas may not be the

same as those of cities, largely studied in college sociology courses, an exposure to Sociology can do no harm. Any courses which aid the student in expressing himself, both orally and through writing, are valuable. Lastly, Haverford has an excellent library. From the material there you should be able to decide what phase of forestry most interests you, and plan your courses accordingly.

I hope to run into more Haverfordians in the forestry profession.

Gulls and Snails on Haverford College Pond

WILLIAM L. BAILY, '83

LAST summer the Haverford College Skating Pond had been let out sufficiently to permit of the removal of silt that, accumulating for a number of years, had been showing above the surface of the water, thereby interfering with the skating.

One day while strolling along the edge, I noticed that the exposed bottom of the pond was covered with thousands of spiral-shaped snail shells, the largest ones measuring about two inches across. As I had never seen or heard of them before, I showed some specimens to Dr. Joshua L. Baily, Jr., Class of 1912, for identification. He at once told me that he had known of their presence in the pond, and that they were a Japanese variety, *bivipara molleata*, discovered in this country within the last twenty years. He related that in 1911 he made a careful search for local shells along the Delaware River banks especially near Riverton, N. J., and found no trace of this variety. Again in 1923 he had occasion to visit the same locality, and for the first time found it in considerable

numbers. As the spot was close to a prominent nursery company's property, he ventured the opinion that the snails had been imported by them from Japan on the roots of plants and later distributed to buyers, some of them eventually reaching the Haverford Pond, as well as others in the neighborhood.

The snail especially interested me when last October I saw some Herring Gulls, which for a number of years have been winter visitors to the pond, feeding upon these snails. Many people go out of their way to see these graceful and attractive birds contentedly swimming about or soaring overhead with watchful eyes for unwary goldfish moving quietly just below the surface of the water. A sudden plunge with closed wings and open bill often results in a successful catch.

But few persons had noticed that since the fish have been decreasing in number, the snails have possibly become the principal food supply of the gulls. The snails have increased enormously, which fact may be the

secret for the large number of gulls attracted to the pond, from ten to fifteen often being seen at one time. I have watched many a gull swimming slowly on the surface, where the depth was not over eight or ten inches, dip down and bring up a snail, crushing it and eating the contents, while

the broken pieces of shell drop to the bottom.

The snails seem to do no harm, and the gulls in their various plumages will no doubt continue to be an interesting attraction and an object for study as long as the present protection is afforded them.

Obituaries

The Board of Editors desire to express their very sincere apologies to John Eberly Parker, Ex-'87, for the entirely premature announcement of his death as it appeared in the December issue of THE HAVERFORDIAN. Mr. Parker is alive and well at his home in Eaton, Ohio. A correction was made immediately in the *Haverford News* and felicitations have been sent Mr. Parker.

1874

John Christian Bullock passed away at his home in West Chester on December 15, 1939 in his seventy-seventh year.

Son of Dr. William R. Bullock, (Class of 1843) Mr. Bullock was an active undergraduate serving as President of the Everett Society, President of his class and Valedictorian.

After graduation, he studied Pharmacy in Philadelphia, receiving the degree of Ph.G., while at the same time becoming one of the founders of the firm of Bullock & Crenshaw with which he was associated for thirty-one years. A member of the Franklin Institute, Curator of the Historical Society of Chester County, he was also an expert photographer, receiving many medals for meritorious work.

His wife, a daughter and three sons survive him.

1883

Belated news of the death of Frank Ellwood Briggs at Boothbay Harbor, Maine on July 13, 1938, has just been received by the Alumni Office.

All of Mr. Briggs' active life was spent in the employ of the West Shore R. R. and its controlling company the New York Central.

1885

One of Haverford's most distinguished sons, Augustus Taber Murray died at his home in Palo Alto, California on March 8th in his seventy-fourth year.

As an undergraduate he had been a member of the Everett Society, Vice-President of the Loganian Society, Latin Salutatorian in 1882, Alumni Prize Orator in 1884, Captain of the Tennis Team and a member of the Football Team.

Upon graduation, he entered Johns Hopkins University, receiving his Ph.D in 1890 which was followed by further graduate study at Leipzig and Berlin, all fitting him for his life work in Classical Literature and of which he was an outstanding figure.

From 1892 until his retirement in 1932 he was head of the Classical Department of Leland Stanford University.

When Haverford received its charter of Phi Beta Kappa in 1898 Dr. Murray was one of those first to be elected, and for his outstanding translations of the Odyssey, the Iliad and the Private Orations of Demosthenes for the Loeb Classical Library, he was awarded the LL.D. at our Pre-Centenary Celebration in 1931.

By happy foresight, in that Dr. Murray was fully advised, one of his close friends and admirers has set up in his memory a Research Scholarship Fund, the interest from which will at a later date be made available for graduate study by Haverfordians.

1887

Paschall Hollingsworth Morris, B.E., died at his home in Villanova on February 23, 1940.

Mr. Morris devoted almost all of his life to the field of Engineering Construction, being successively associated with the Henry G. Morris, P. H. Morris, Morris Engineering, and the Cresson-Morris Companies of Philadelphia.

He is survived by his wife, a daughter and a son.

1889

Colonel John White Geary, Ex-'89, banker and broker, passed away in his Philadelphia apart-

ment on February 25th, in his seventy-second year.

Son of General John W. Geary, a Civil War leader and later Governor of Pennsylvania, Mr. Geary was at Haverford but for a short time, removing to the University of Penna., and Harvard for his education.

During the World War, he was in charge of the Military Intelligence Office in the Philadelphia District.

His wife, the former Mary DeForest Harrison, a daughter and two sons survive him.

1889

After apparently recovering from a serious illness, death came rather suddenly to Herbert Morris, at Saratoga Springs, N. Y., on January 7, 1940.

Son of Galloway Chesten Morris and Hannah Perot, he was granted the B. E. degree in 1889 and immediately began a long career with the Cambria Iron Co. at Johnstown, Pa., and other companies in the Iron and Steel field. In recent years he has made his home at Lake Goerge, N. Y.

1890

The Class of 1890 will miss the presence of John Frazier Taylor Lewis at their fiftieth anniversary in June, owing to his death at his home in near-by Broomall on February 19th.

Mr. Lewis, first honor student in his class, and holder of the

B.E. degree frequently given at that time, had been successively farmer, engineer, and dealer in building materials.

Always interested in education he had for almost thirty-five years served as a member of the local Board of Education. He was an active Mason and an Elder of the Marple Presbyterian Church.

His two sons, Benjamin J. and Andrew L. Lewis are both graduates of Haverford in the Classes of 1914 and 1923 respectively. They and their mother survive.

1901

Walter Mellor, son of Alfred Mellor (Class of 1861) and brother of Ralph Mellor (Class of 1899) died after a very brief illness at his home in Germantown on January 11th.

Few sons of Haverford have left so lasting an imprint upon the campus as Mr. Mellor, for his work here includes the Hilles Laboratory and the Strawbridge Observatory.

Mr. Mellor was an active member of the Mask and Wig Club of the University, a member of Phi Gamma Delta, a Fellow of the American Institute of Architects, a member of the Art Alliance, Germantown Cricket Club, T. Square Club and other societies.

He is survived by his wife and one daughter.

1906

Aubrey Cowtan Dickson, A.B., died at his home 515 W. Clapier Street, Germantown on April 30th after a brief illness.

Entering from the Wm. Penn Charter School, Mr. Dickson was an excellent all-round student, active in sports, and elected to Phi Beta Kappa in his Senior year. In 1933-35 he was Vice-President of the Haverford Chapter.

Following graduation he was engaged in various business enterprises in Philadelphia.

At the time of the Centenary Campaign, Mr. Dickson was Class Representative and did yeoman service in securing gifts from his classmates.

Two sons, Aubrey C. Dickson, Jr., '38, Wallace Hallowell, and a daughter, Bertinia Edith, survive him.

1922

Sudden death due to coronary thrombosis closed the career of Allen K. Bucknell, '22, in a Cambridge, Mass., hospital on April 2nd.

A three-letter man in Soccer, Basketball and Tennis of which last he was Captain, Bucknell was also a member of the Freshman Debating Team, and winner of the Freshman Mathematics Prize.

After graduating with the S.B. degree, he taught for several years at Wilmington Friends'

School and at the Moses Brown School before entering the Harvard School of Business Administration in which he was later an instructor.

Subsequently associating him-

self with the Old Colony Trust Co., of Boston, he rose steadily to the responsible position of Assistant Trust Officer.

His widow, two brothers and a sister survive.

